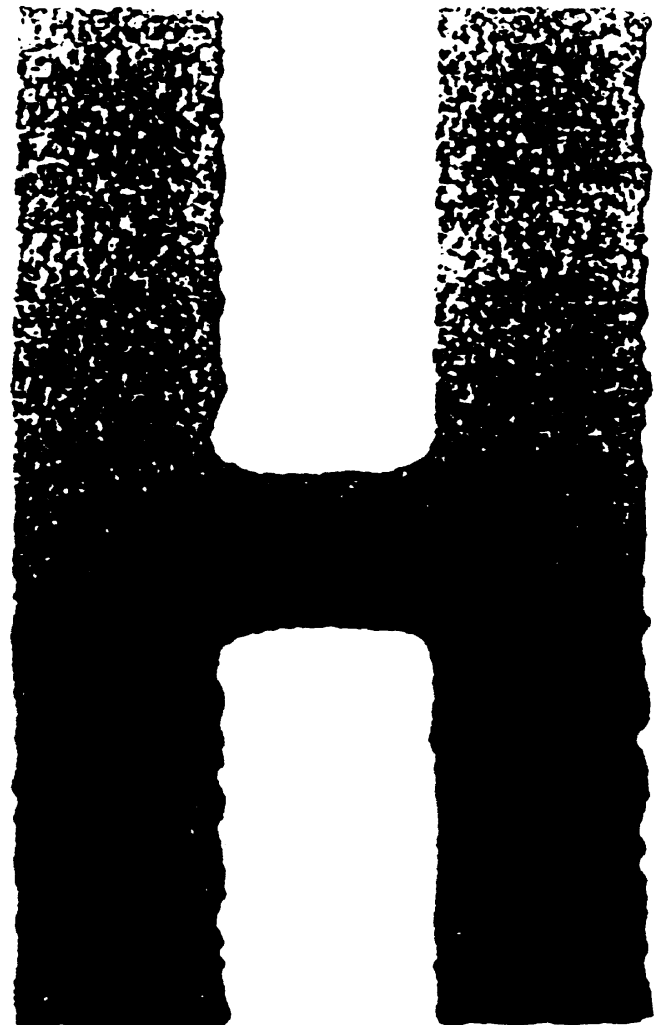


TOSHIBA

SERVICE HANDBOOK

MULTIFUNCTIONAL DIGITAL COLOR SYSTEMS

e-STUDIO0281c/351c/451c



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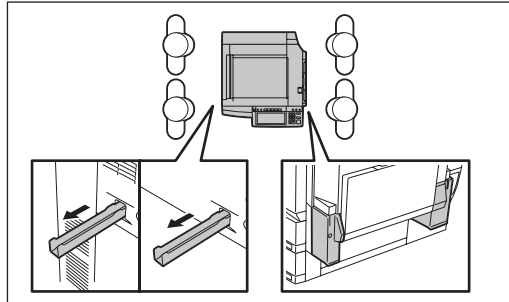
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GENERAL PRECAUTIONS REGARDING THE SERVICE FOR e-STUDIO281c/351c/451c

The installation and service should be done by a qualified service technician.

1) Transportation/Installation

- When transporting/installing the equipment, employ four persons and be sure to hold the positions as shown in the figure.
The equipment is quite heavy and weighs approximately 113 kg (249 lb), therefore pay full attention when handling it.



- Be sure not to hold the movable parts or units (e.g. the control panel, ADU or RADF) when transporting the equipment.
- Be sure to use a dedicated outlet with AC 110 V / 13.2 A, 115 V or 127 V / 12 A, 220-240 V or 240 V / 8 A for its power source.
- The equipment must be grounded for safety.
- Select a suitable place for installation. Avoid excessive heat, high humidity, dust, vibration and direct sunlight.
- Provide proper ventilation since the equipment emits a slight amount of ozone.
- To insure adequate working space for the copying operation, keep a minimum clearance of 80 cm (32") on the left, 80 cm (32") on the right and 10 cm (4") on the rear.
- The equipment shall be installed near the socket outlet and shall be accessible.
- Be sure to fix and plug in the power cable securely after the installation so that no one trips over it.

2) General Precautions at Service

- Be sure to turn the power OFF and unplug the power cable during service (except for the service should be done with the power turned ON).
- Unplug the power cable and clean the area around the prongs of the plug and socket outlet once a year or more. A fire may occur when dust lies on this area.
- When the parts are disassembled, reassembly is the reverse of disassembly unless otherwise noted in this manual or other related documents. Be careful not to install small parts such as screws, washers, pins, E-rings, star washers in the wrong places.
- Basically, the equipment should not be operated with any parts removed or disassembled.
- The PC board must be stored in an anti-electrostatic bag and handled carefully using a wristband since the ICs on it may be damaged due to static electricity.

Caution: Before using the wristband, unplug the power cable of the equipment and make sure that there are no charged objects which are not insulated in the vicinity.

- Avoid expose to laser beam during service. This equipment uses a laser diode. Be sure not to expose your eyes to the laser beam. Do not insert reflecting parts or tools such as a screwdriver on the laser beam path. Remove all reflecting metals such as watches, rings, etc. before starting service.
- Be sure not to touch high-temperature sections such as the exposure lamp, fuser unit, damp heater and areas around them.
- Be sure not to touch high-voltage sections such as the chargers, transfer belt, 2nd transfer roller, developer, IH control circuit, high-voltage transformer, exposure lamp control inverter, inverter for the LCD backlight and power supply unit. Especially, the board of these components should not be touched since the electric charge may remain in the capacitors, etc. on them even after the power is turned OFF.
- Make sure that the equipment will not operate before touching potentially dangerous places (e.g. rotating/operating sections such as gears, belts pulleys, fans and laser beam exit of the laser optical unit).
- Be careful when removing the covers since there might be the parts with very sharp edges underneath.
- When servicing the equipment with the power turned ON, be sure not to touch live sections and rotating/operating sections. Avoid exposing your eyes to laser beam.
- Use designated jigs and tools.
- Use recommended measuring instruments or equivalents.
- Return the equipment to the original state and check the operation when the service is finished.

3) Important Service Parts for Safety

- The breaker, door switch, fuse, thermostat, thermofuse, thermistor, IC-RAMs including lithium batteries, etc. are particularly important for safety. Be sure to handle/install them properly. If these parts are short-circuited and their functions become ineffective, they may result in fatal accidents such as burnout. Do not allow a short-circuit or do not use the parts not recommended by Toshiba TEC Corporation.

4) Cautionary Labels

- During servicing, be sure to check the rating plate and cautionary labels such as "Unplug the power cable during service", "CAUTION. HOT", "CAUTION. HIGH VOLTAGE", "CAUTION. LASER BEAM", etc. to see if there is any dirt on their surface and if they are properly stuck to the equipment.

5) Disposal of the Equipment, Supplies, Packing Materials, Used Batteries and IC-RAMs

- Regarding the recovery and disposal of the equipment, supplies, packing materials, used batteries and IC-RAMs including lithium batteries, follow the relevant local regulations or rules.

Caution:

Dispose of used batteries and IC-RAMs including lithium batteries according to this manual.

Attention:

Se débarrasser de batteries et IC-RAMs usés y compris les batteries en lithium selon ce manuel.

Vorsicht:

Entsorgung der gebrauchten Batterien und IC-RAMs (inclusive der Lithium-Batterie) nach diesem Handbuch.

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- 10. WIRE HARNESS CONNECTION DIAGRAMS**

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1. SPECIFICATIONS/ACCESSORIES/OPTIONS/SUPPLIES

1.1 Specifications

- Copy process Indirect electrophotographic process (dry)
- Type..... Desktop type (Console type: when optional Paper Feed Pedestal (PFP) or optional Large Capacity Feeder (LCF) is installed.)
- Original table Fixed type (the left rear corner used as guide to place originals)
- Accepted originals Original type: Sheets, books and 3-dimensional objects
 Note that when the optional Reversing Automatic Document Feeder is used, carbon, bounded or stapled originals cannot be accepted, and paper type of the original should be 35-157g/m² (9.3 lb. Bond -58 lb. Cover) for single-sided copy and 50-157 g/m² (13.3 lb. Bond -58 lb. Cover) for double-sided copy.
 Maximum size: A3/LD
- Copy speed (Copies/min.)

e-STUDIO281c

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|---------|----------------|--------------------|---------|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT | 28 (11) | 28 (11) | 16 (5) | 28 (11) | 28 (11) |
| B5, A5-R, ST-R | | | | | - |
| A4-R, B5-R, LT-R | 21 (5) | 21 (5) | 16 (5) | 21 (5) | - |
| B4, LG | 18 (5) | 18 (5) | 16 (5) | 18 (5) | - |
| A3, LD | 16 (5) | 16 (5) | 16 (5) | 16 (5) | - |

e-STUDIO351c

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|---------|----------------|--------------------|---------|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT | 35 (11) | 35 (11) | 21 (5) | 35 (11) | 35 (11) |
| B5, A5-R, ST-R | | | | | - |
| A4-R, B5-R, LT-R | 28 (5) | 28 (5) | 21 (5) | 28 (5) | - |
| B4, LG | 24 (5) | 24 (5) | 21 (5) | 24 (5) | - |
| A3, LD | 21 (5) | 21 (5) | 21 (5) | 21 (5) | - |

e-STUDIO451c

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|---------|----------------|--------------------|---------|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT | 45 (11) | 45 (11) | 22 (5) | 45 (11) | 45 (11) |
| B5, A5-R, ST-R | | | | | - |
| A4-R, B5-R, LT-R | 32 (5) | 32 (5) | 22 (5) | 32 (5) | - |
| B4, LG | 26 (5) | 26 (5) | 22 (5) | 26 (5) | - |
| A3, LD | 22 (5) | 22 (5) | 22 (5) | 22 (5) | - |

- * "-" means "Not acceptable".
- * When originals are manually placed for single-sided, continuous copying.
- * Plain paper is selected for the paper type.
- * When the Reversing Automatic Document Feeder is used, copying in the speed of 28, 35 and 45 sheets per minute are only possible under the following conditions:

- Original: A4 or LT (single-sided)
- Mode: APS and Automatic density not selected, Plain paper mode
- Number of copies:
Black mode: 28 sheets or more (e-STUDIO281c), 35 sheets or more (e-STUDIO351c), 45 sheets or more (e-STUDIO451c)
Color mode: 11 sheets or more
- Reproduction ratio: 100%

* The values in () can be realized in the color mode.

Thick paper / OHP
e-STUDIO281c

Thick1 (81 g/m² to 105 g/m², 21 lb. Bond to 28 lb. Bond)

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|---------|----------------|--------------------|---------|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT | 28 (11) | 28 (11) | 16 (5) | 28 (11) | 28 (11) |
| B5, A5-R, ST-R | | | | | - |
| A4-R, B5-R, LT-R | 20 (5) | 20 (5) | 16 (5) | 20 (5) | - |
| B4, LG | 18 (5) | 18 (5) | 16 (5) | 18 (5) | - |
| A3, LD | 16 (5) | 16 (5) | 16 (5) | 16 (5) | - |

Thick2 (106 g/m² to 163 g/m², 29 lb. Bond to 90 lb. Index)

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|--------|----------------|--------------------|-----|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT, B5, A5-R, ST-R | - | 20 (6) | 10 (2) | - | - |
| A4-R, B5-R, LT-R | - | 14 (3) | 10 (2) | - | - |
| B4, LG | - | 11 (3) | 10 (2) | - | - |
| A3, LD | - | 10 (2) | 10 (2) | - | - |

Thick3 (164 g/m² to 209 g/m², 91 lb. Index to 110 lb. Index)

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|--------|----------------|--------------------|-----|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT, B5, A5-R, ST-R | - | 20 (2) | 10 (2) | - | - |
| A4-R, B5-R, LT-R | - | 14 (2) | 10 (2) | - | - |
| B4, LG | - | 11 (2) | 10 (2) | - | - |
| A3, LD | - | 10 (2) | 10 (2) | - | - |

OHP

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|--------|----------------|--------------------|-----|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT | - | 10 (3) | - | - | - |

e-STUDIO351c

Thick1 (81 g/m² to 105 g/m², 21 lb. Bond to 28 lb. Bond)

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|---------|----------------|--------------------|---------|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT | 30 (11) | 30 (11) | 16 (5) | 30 (11) | 30 (11) |
| B5, A5-R, ST-R | | | | | - |
| A4-R, B5-R, LT-R | 23 (5) | 23 (5) | 16 (5) | 23 (5) | - |
| B4, LG | 19 (5) | 19 (5) | 16 (5) | 19 (5) | - |
| A3, LD | 16 (5) | 16 (5) | 16 (5) | 16 (5) | - |

Thick2 (106 g/m² to 163 g/m², 29 lb. Bond to 90 lb. Index)

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|--------|----------------|--------------------|-----|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT, B5, A5-R, ST-R | - | 20 (6) | 10 (2) | - | - |
| A4-R, B5-R, LT-R | - | 14 (3) | 10 (2) | - | - |
| B4, LG | - | 11 (3) | 10 (2) | - | - |
| A3, LD | - | 10 (2) | 10 (2) | - | - |

Thick3 (164 g/m² to 209 g/m², 91 lb. Index to 110 lb. Index)

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|--------|----------------|--------------------|-----|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT, B5, A5-R, ST-R | - | 20 (2) | 10 (2) | - | - |
| A4-R, B5-R, LT-R | - | 14 (2) | 10 (2) | - | - |
| B4, LG | - | 11 (2) | 10 (2) | - | - |
| A3, LD | - | 10 (2) | 10 (2) | - | - |

OHP

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|--------|----------------|--------------------|-----|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT | - | 10 (3) | - | - | - |

e-STUDIO451c

Thick1 (81 g/m² to 105 g/m², 21 lb. Bond to 28 lb. Bond)

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|---------|----------------|--------------------|---------|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT | 30 (11) | 30 (11) | 16 (5) | 30 (11) | 30 (11) |
| B5, A5-R, ST-R | | | | | - |
| A4-R, B5-R, LT-R | 23 (5) | 23 (5) | 16 (5) | 23 (5) | - |
| B4, LG | 19 (5) | 19 (5) | 16 (5) | 19 (5) | - |
| A3, LD | 16 (5) | 16 (5) | 16 (5) | 16 (5) | - |

Thick2 (106 g/m² to 163 g/m², 29 lb. Bond to 90 lb. Index)

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|--------|----------------|--------------------|-----|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT, B5, A5-R, ST-R | - | 20 (6) | 10 (2) | - | - |
| A4-R, B5-R, LT-R | - | 14 (3) | 10 (2) | - | - |
| B4, LG | - | 11 (3) | 10 (2) | - | - |
| A3, LD | - | 10 (2) | 10 (2) | - | - |

Thick3 (164 g/m² to 209 g/m², 91 lb. Index to 110 lb. Index)

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|--------|----------------|--------------------|-----|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT, B5, A5-R, ST-R | - | 20 (2) | 10 (2) | - | - |
| A4-R, B5-R, LT-R | - | 14 (2) | 10 (2) | - | - |
| B4, LG | - | 11 (2) | 10 (2) | - | - |
| A3, LD | - | 10 (2) | 10 (2) | - | - |

OHP

| Paper supply Paper size | Drawer | Bypass feed | | PFP | LCF (A4/LT only) |
|----------------------------|--------|----------------|--------------------|-----|---------------------|
| | | Size specified | Size not specified | | |
| A4, LT | - | 10 (3) | - | - | - |

- * "-" means "Not acceptable".
- * When originals are manually placed for single side, continuous copying.
- * The bypass copying speed is measured with the paper size specified.
- * The values in () can be realized in the color mode.

* System copy speed

| Copy mode | | Sec. | | |
|--|--------|-----------------|-----------------|-----------------|
| | | e-STUDIO281c | e-STUDIO351c | e-STUDIO451c |
| Single-sided originals ↓ Single-sided copies | 1 set | 31.26 (71.97) | 28.15 (71.97) | 24.99 (71.97) |
| | 3 sets | 74.07 (182.19) | 61.02 (182.19) | 50.03 (182.19) |
| | 5 sets | 116.64 (289.94) | 95.19 (289.94) | 76.63 (289.94) |
| Single-sided originals ↓ Double-sided copies | 1 set | 32.61 (81.63) | 29.65 (81.63) | 28.49 (81.63) |
| | 3 sets | 74.69 (189.38) | 64.92 (189.38) | 60.76 (189.38) |
| | 5 sets | 117.45 (299.04) | 101.75 (299.04) | 92.2 (299.04) |
| Double-sided originals ↓ Double-sided copies | 1 set | 64.24 (138.12) | 63.54 (138.12) | 63.01 (138.12) |
| | 3 sets | 150.73 (355.91) | 134.25 (355.91) | 126.36 (355.91) |
| | 5 sets | 234.59 (574.51) | 205.69 (574.51) | 189.67 (574.51) |
| Double-sided originals ↓ Single-sided copies | 1 set | 58.85 (128.31) | 58.76 (128.31) | 58.09 (128.31) |
| | 3 sets | 143.68 (347.08) | 126.57 (347.08) | 110.94 (347.08) |
| | 5 sets | 228.58 (565.02) | 194.49 (565.02) | 165.19 (565.02) |

- * Shows the period of time from when the [START] button is pressed until the message "Ready" is displayed. (10 sheets of A4/LT size original are set on the RADF and one of the copy modes above is selected.)
- * Setting: when in the Text/Photo mode with Automatic density and APS/AMS set to OFF, or when in the sort mode with paper fed from the upper drawer.
- * The Saddle Stitch Finisher and hole punch unit not installed.
- * The values in () are the speeds of when in the color mode.

• Copy paper

| | Drawer | ADU | PFP | LCF | Bypass copy | Remarks |
|---------------|--------|--|-----|--------|--|---|
| Size | | A3 to A5-R, LD to ST-R, 13" LG, 8.5"SQ | | A4, LT | A3 to A6-R, LD to ST-R, 13" LG, 8.5"SQ, 305 x 457 mm (12" x 18") (Non-standard or userspec- ified sizes can be set.) | |
| Weight | | 64 to 105 g/m ² 17 to 28 lb. Bond | | | 64 to 209 g/m ² , 17 lb. Bond to 110 lb. Index (Continuous feeding) 64 to 209 g/m ² , 17 lb. Bond to 110 lb. Index (Single paper feeding) | |
| Special paper | | - | | | Labels, OHP film (thickness: 80µm or thicker) | Special paper recom- mended by Toshiba Tec |

- First copy time Approx. 6.8 sec. or less (black), approx. 16.2 sec. or less (color)
(A4/LT, upper drawer, 100%, original placed manually)
- Warming-up time Approx. 40 sec. (Stand-alone, temperature: 20°C)
- Multiple copying..... Up to 999 copies; Key in set numbers
- Reproduction ratio Actual ratio: 100±0.5%
Zooming: 25 to 400% in increments of 1%
(25 to 200% when using RADF)
- Resolution/Gradation..... Scanning: 600 dpi x 600 dpi
Printing: Equivalent to 2400 dpi x 600 dpi (black)
Equivalent to 600 dpi x 600 dpi (color)

- Eliminated portion..... Leading edges: 3.0±2.0 mm, Side/trailing edges: 2.0±2.0 mm (black copy)
 Leading edges: 5.0±2.0 mm, Side/trailing edges: 2.0±2.0 mm (color copy)
 Leading / trailing edges: 5.0±2.0 mm, Side edges: 5.0±2.0 mm (black / color print)
- Paper feeding Standard drawers:
 2 drawers (stack height 60.5 mm, equivalent to 550 sheets; 64 to 80 g/m² (17 to 22 lb. Bond))
 PFP:
 Option (One drawer or two: stack height 60.5 mm, equivalent to 550 sheets; 64 to 80 g/m² (17 to 22 lb. Bond))
 LCF:
 Option (Stack height 137.5 mm x 2: equivalent to 2500 sheets; 64 to 80 g/m² (17 to 22 lb. Bond))
 Bypass feeding:
 Stack height 11 mm: equivalent to 100 sheets; 64 to 80 g/m² (17 to 22 lb. Bond)
- Capacity of originals in the reversing automatic document feeder (Option)
 A3 to A5-R, LD to ST-R:
 100 sheets / 80 g/m² (Stack height 16 mm or less)
- Automatic duplexing unit Stackless, Switchback type
- Toner supply Automatic toner density detection/supply
 Toner cartridge replacing method
- Density control..... Automatic density mode and manual density mode selectable in 11 steps
- Weight Approximately 113 kg (249 lb.)
- Power requirements AC 110 V / 13.2 A, 115 V or 127 V / 12 A
 220-240 V or 240 V / 8 A (50/60 Hz)
- * The acceptable value of each voltage is ±10%.
- Power consumption..... 1.5 kW or less (100 V series), 17 kW or less (200 V series)
- * The electric power is supplied to the RADF, Finisher, PFP and LCF through the equipment.
- Total counter..... Electronical counter
- Dimensions of the equipment..... See the figure below (W 660 x D 758 x H 739 (mm))
- * When the tilt angle of the control panel is 45 degrees.

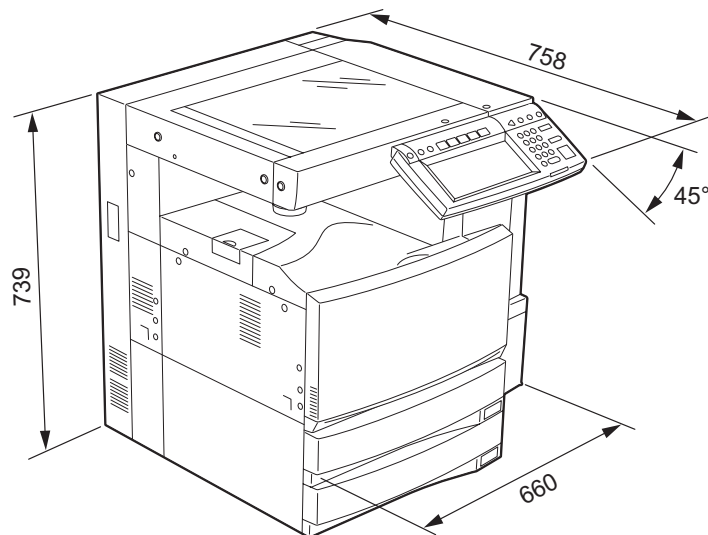


Fig.1-1

1.2 Accessories

| | |
|--|---------------------------------|
| Unpacking/Setup instruction | 1 set |
| Operator's manual | 4 pcs. (except for MJD and ASU) |
| Operator's manual pocket | 1 pc. |
| Power cable | 1 pc. |
| Warranty sheet | 1 pc. (for NAD) |
| Setup report | 1 set (for NAD, MJD and CND) |
| PM sticker | 1 pc. (for MJD) |
| Drum (installed inside of the equipment) | 1 pc. |
| Control panel stopper | 1 pc. |
| Color developer holder | 6 pc. |
| Rubber plug | 4 pcs. |
| Blind seal (small / large) | 3 pcs. /1 pc. |
| CD-ROM | 3 pcs. |
| Developer material (Y, M, C, K) | 1 pc. each (for CND) |
| Screw M4 x 8 | 1 pc. |
| Guide | 1 pc. |
| Approval sheet | 1 set (for CND) |
| Toner cartridge (Y, M, C, K) | 1 pc. each (for CND) |
| Platen cover | 1 pc. (for CND) |

* Machine version

| | |
|------|--------------------|
| NAD: | North America |
| MJD: | Europe |
| AUD: | Australia |
| ASD: | Asia, Argentine |
| TWD: | Taiwan |
| SAD | Saudi Arabia |
| ASU | Saudi Arabia, Asia |
| CND | China |
| KRD | Korea |
| JPD: | Japan |

1.3 Options

| | |
|--|---|
| Platen cover | KA-3511PC / -C |
| Reversing Automatic Document Feeder (RADF) | MR-3018 |
| Drawer module | MY-1021 / -C |
| Paper Feed Pedestal (PFP) | KD-1011 / -C |
| Large Capacity Feeder (LCF) | KD-1012 A4/LT / A4-C |
| Hanging Finisher | MJ-1022 / -C |
| Finisher | MJ-1023 / -C |
| Saddle Stitch Finisher | MJ-1024 / -C |
| Hole punch unit | MJ-6004 N/E/F/S / E-C |
| Staple cartridge | STAPLE-1600 (for MJ-1022) STAPLE-2000 (for MJ-1023/1024) STAPLE-600 (for saddle stitcher of MJ-1024) |
| Bridge kit | KN-3511 / -C |
| Work table | KK-3511 / -C |
| Damp heater kit | MF-3511U/E |
| FAX unit | GD-1200 NA/AU/AS/EU/C/TW |
| 2nd line for fax unit | GD-1160 NA/EU-N/C/TW |
| 128 MB Expansion memory | GC-1181 |
| 512 MB Expansion memory | GC-1230 |
| Wireless LAN module | GN-1040/1041 |
| PCI slot | GO-1060 |
| Scrambler board | GP-1040 |
| Bluetooth module | GN-2010 |
| Antenna | GN-3010 |
| Parallel interface kit | GF-1140 |
| Data overwrite kit | GP-1060 |
| Desk | MH-1700 |
| Harness kit for coin controller | GQ-1020 |

Notes:

1. The bridge kit (KN-3511) is necessary for installation of the finisher (MJ-1022, MJ-1023 or MJ-1024).
2. The finisher (MJ-1023 or MJ-1024) is necessary for installation of the hole punch unit (MJ-6004N/E/F/S).
3. The PCI slot (GO-1060) is necessary for the installation of the scrambler board (GP-1040) and the parallel interface kit (GF-1140).
4. The antenna (GN-3010) is necessary to enable the wireless LAN module (GN-1040/1041) and the bluetooth module (GN-2010).
5. Up to 1 antenna (GN-3010) can be connected to the wireless LAN module (GN-1040/1041).
6. When the wireless LAN module (GN-1040/1041) and the bluetooth module (GN-2010) are installed together, only 1 antenna (GN-3010) can be connected to each.

1.4 Supplies

| | | |
|---------------------|----------------------|--------|
| Drum | OD-3511N | |
| Toner bag | PS-TB-281C/ C-E/ C-C | |
| Developer (K) | D-3511-K | |
| Developer (Y) | D-281C-Y | |
| Developer (M) | D-281C-M | |
| Developer (C) | D-281C-C | |
| Toner cartridge (K) | PS-ZT281C-K(4) | NAD |
| | PS-ZT281C-EK(1) | MJD |
| | PS-ZT3511DK | Others |
| | PS-ZT3511TK | TWD |
| | PS-ZT3511CK | CND |
| Toner cartridge (Y) | PS-ZT281C-Y(4) | NAD |
| | PS-ZT281C-EY(1) | MJD |
| | PS-ZT3511DY | Others |
| | PS-ZT3511TY | TWD |
| | PS-ZT3511CY | CND |
| Toner cartridge (M) | PS-ZT281C-M(4) | NAD |
| | PS-ZT281C-EM(1) | MJD |
| | PS-ZT3511DM | Others |
| | PS-ZT3511TM | TWD |
| | PS-ZT3511CM | CND |
| Toner cartridge (C) | PS-ZT281C-C(4) | NAD |
| | PS-ZT281C-EC(1) | MJD |
| | PS-ZT3511DC | Others |
| | PS-ZT3511TC | TWD |
| | PS-ZT3511CC | CND |

1.5 System List

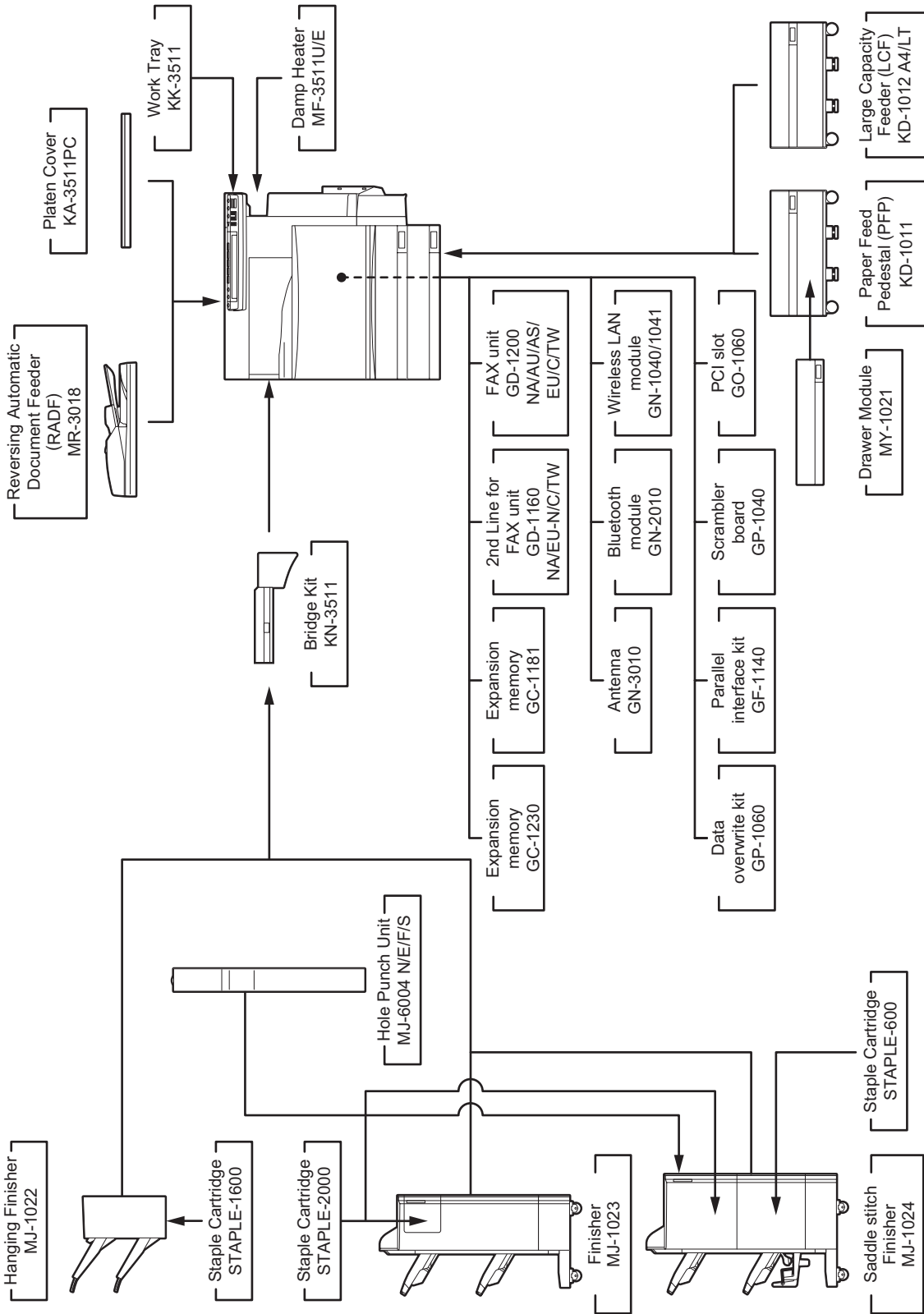


Fig.1-2

2. ERROR CODE AND SELF-DIAGNOSTIC MODE

2.1 Error Code List

The following error codes is displayed at the upper right of the screen when the “CLEAR PAPER” or “CALL SERVICE” symbol is blinking.

2.1.1 Jam

| Error code | Classification | Contents | Troubleshooting |
|------------|-----------------|---|-----------------|
| E010 | Paper exit jam | Jam not reaching the exit sensor : The paper which has passed through the fuser unit does not reach the exit sensor. | Ch.5.1.1 |
| E020 | Paper exit jam | Stop jam at the exit sensor: The trailing edge of the paper does not pass the exit sensor after its leading edge has reached this sensor. | Ch.5.1.1 |
| E030 | Other paper jam | Power-ON jam: The paper is remaining on the paper transport path when power is turned ON. | Ch.5.1.4 |
| E061 | | Incorrect paper size setting for upper drawer: The size of paper in the 1st drawer differs from size setting of the equipment. | Ch.5.1.4 |
| E062 | | Incorrect paper size setting for lower drawer: The size of paper in the 2nd drawer differs from size setting of the equipment. | Ch.5.1.4 |
| E063 | | Incorrect paper size setting for PFP upper drawer: The size of paper in the 3rd drawer differs from size setting of the equipment. | Ch.5.1.4 |
| E064 | | Incorrect paper size setting for PFP lower drawer: The size of paper in the 4th drawer differs from size setting of the equipment. | Ch.5.1.4 |
| E065 | | Incorrect paper size setting for bypass tray: The size of paper in the bypass tray differs from size setting of the equipment. | Ch.5.1.4 |
| E090 | | Image data delay jam: Image data to be printed cannot be prepared. | Ch.5.1.4 |

| Error code | Classification | Contents | Troubleshooting |
|-------------------|-----------------------|---|------------------------|
| E110 | Paper misfeeding | ADU misfeeding (Paper not reaching the registration sensor): The paper which has passed through ADU does not reach the registration sensor during duplex printing. | Ch.5.1.2 |
| E120 | | Bypass misfeeding (Paper not reaching the registration sensor): The paper fed from the bypass tray does not reach the registration sensor. | Ch.5.1.2 |
| E130 | | Upper drawer misfeeding (Paper not reaching the upper drawer feed sensor): The paper fed from the upper drawer does not reach the upper drawer feed sensor. | Ch.5.1.2 |
| E140 | | Lower drawer misfeeding (Paper not reaching the lower drawer feed sensor): The paper fed from the lower drawer does not reach the lower drawer feed sensor. | Ch.5.1.2 |
| E150 | | PFP upper drawer misfeeding (Paper not reaching the PFP upper drawer feed sensor): The paper fed from the PFP upper drawer does not reach the PFP upper drawer feed sensor. | Ch.5.1.2 |
| E160 | | PFP lower drawer misfeeding (Paper not reaching the PFP lower drawer feed sensor): The paper fed from the PFP lower drawer does not reach the PFP lower drawer feed sensor. | Ch.5.1.2 |
| E190 | | LCF misfeeding (Paper not reaching the LCF feed sensor): The paper fed from the LCF does not reach the LCF feed sensor. | Ch.5.1.2 |
| E200 | Paper transport jam | Upper drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the upper drawer feed sensor. | Ch.5.1.3 |

| Error code | Classification | Contents | Troubleshooting |
|------------|-----------------------------------|---|-----------------|
| E210 | Paper transport jam | Lower drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the upper drawer feed sensor. | Ch.5.1.3 |
| E220 | | Lower drawer transport jam (Paper not reaching the upper drawer feed sensor): The paper does not reach the upper drawer feed sensor after it has passed the lower drawer feed sensor. | Ch.5.1.3 |
| E300 | | PFP upper drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the upper drawer feed sensor. | Ch.5.1.3 |
| E310 | | PFP upper drawer transport jam (Paper not reaching the upper drawer feed sensor): The paper does not reach the upper drawer feed sensor after it has passed the lower drawer feed sensor. | Ch.5.1.3 |
| E320 | | PFP upper drawer transport jam (Paper not reaching the lower drawer feed sensor): The paper does not reach the lower drawer feed sensor after it has passed the PFP upper drawer feed sensor. | Ch.5.1.3 |
| E330 | | PFP lower drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the upper drawer feed sensor. | Ch.5.1.3 |
| E340 | | PFP lower drawer transport jam (Paper not reaching the upper drawer feed sensor): The paper does not reach the upper drawer feed sensor after it has passed the lower drawer feed sensor. | Ch.5.1.3 |
| E350 | | PFP lower drawer transport jam (Paper not reaching the lower drawer feed sensor): The paper does not reach the lower drawer feed sensor after it has passed the PFP upper drawer feed sensor. | Ch.5.1.3 |
| E360 | | PFP lower drawer transport jam (Paper not reaching the PFP upper drawer feed sensor): The paper does not reach the PFP upper drawer feed sensor after it has passed the PFP lower drawer feed sensor. | Ch.5.1.3 |
| E400 | Cover open jam | Jam access cover open jam: The jam access cover has opened during printing. | Ch.5.1.3 |
| E410 | | Front cover open jam: The front cover has opened during printing. | Ch.5.1.5 |
| E420 | Cover open jam | PFP side cover open jam: The PFP side cover has opened during printing. | Ch.5.1.5 |
| E430 | | ADU open jam: The ADU has opened during printing. | Ch.5.1.5 |
| E440 | | Side cover open jam: The side cover has opened during printing. | Ch.5.1.5 |
| E450 | | LCF side cover open jam: The LCF side cover has opened during printing. | Ch.5.1.5 |
| E480 | | Bridge unit open jam: The bridge unit has opened during printing. | Ch.5.1.5 |
| E510 | Paper transport jam (ADU section) | Jam not reaching the ADU entrance sensor: The paper does not reach the ADU entrance sensor after it is switchbacked in the exit section. | Ch.5.1.3 |
| E520 | | Stop jam in the ADU: The paper does not reach the ADU exit sensor after it has passed the ADU entrance sensor. | Ch.5.1.3 |

| Error code | Classification | Contents | Troubleshooting |
|-------------------|----------------------------|--|------------------------|
| E550 | Other paper jam | Paper remaining jam on the transport path: The paper is remaining on the transport path when printing is finished (caused by a multiple paper feeding). | Ch.5.1.4 |
| E712 | RADF jam | Jam not reaching the original registration sensor: The original fed from the original feeding tray does not reach the original registration sensor. | Ch.5.1.6 |
| E713 | | Cover open jam in the read ready status: Jam caused by opening of the RADF jam access cover or front cover while the RADF is waiting for the scanning start signal from the equipment. | Ch.5.1.6 |
| E714 | | Feed signal reception jam: The feed signal is received even no original exists on the original feeding tray. | Ch.5.1.6 |
| E721 | | Jam not reaching the read sensor: The original does not reach the read sensor after it has passed the registration sensor (when scanning obverse side) or the reverse sensor (when scanning reverse side). | Ch.5.1.6 |
| E722 | | Jam not reaching the original exit/reverse sensor (during scanning): The original which passed the read sensor does not reach the original exit/reverse sensor when it is transported from the scanning section to exit section. | Ch.5.1.6 |
| E724 | | Stop jam at the original registration sensor: The trailing edge of the original does not pass the original registration sensor after its leading edge has reached this sensor. | Ch.5.1.6 |
| E725 | | Stop jam at the read sensor: The trailing edge of the original does not pass the read sensor after its leading edge has reached this sensor. | Ch.5.1.6 |
| E731 | | Stop jam at the original exit/reverse sensor: The trailing edge of the original does not pass the original exit/reverse sensor after its leading edge has reached this sensor. | Ch.5.1.6 |
| E860 | | RADF jam access cover open: The RADF jam access cover has opened during RADF operation. | Ch.5.1.6 |
| E870 | | RADF open jam: RADF has opened during RADF operation. | Ch.5.1.6 |
| E910 | Finisher jam (Bridge unit) | Jam at the bridge unit transport sensor 1: The paper does not reach the bridge unit transport sensor 1 after it has passed the exit sensor. | Ch.5.1.7 [1] |
| E920 | | Stop jam at the bridge unit transport sensor 1: The trailing edge of the paper does not pass the bridge unit transport sensor 1 after its leading edge has reached the sensor. | Ch.5.1.7 [1] |
| E930 | | Jam at the bridge unit transport sensor 2: The trailing edge of the paper does not reach the bridge unit transport sensor 2 after its leading edge has reached the bridge unit transport sensor 1. | Ch.5.1.7 [1] |
| E940 | | Stop jam at the bridge unit transport sensor 2: The trailing edge of the paper does not pass the bridge unit transport sensor 2 after its leading edge has reached the bridge unit transport sensor 2. | Ch.5.1.7 [1] |
| E9F0 | Finisher jam (Punch unit) | Punching jam: Punching is not performed properly. [MJ-1023/1024 (when MJ-6004 is installed)] | Ch.5.1.7 [4] |

| Error code | Classification | Contents | Troubleshooting |
|------------|---|---|---|
| EA10 | Finisher jam (Finisher section) | Paper transport delay jam: The paper which has passed the bridge unit does not reach the inlet sensor. [MJ-1022/1023/1024] | Ch.5.1.7 [2] |
| EA20 | | Paper transport stop jam: (1) The paper does not pass through the inlet sensor. [MJ-1022/1023/1024] (2) The paper has passed through the inlet sensor but does not reach or pass the feed path sensor or processing tray sensor. [MJ-1023/1024] | Ch.5.1.7 [2] |
| EA30 | | Power-ON jam: (1) Paper exists at the inlet sensor when power is turned ON. [MJ-1022/1023/1024] (2) Paper exists at the feed path sensor or processing tray sensor when power is turned ON. [MJ-1023/1024] | Ch.5.1.7 [2] |
| EA40 | Finisher jam (Finisher section) | Door open jam: 1) The finisher has been released from the equipment during printing. [MJ-1022] 2) The upper/front cover of the finisher section or the upper/ front door of the puncher section has opened during printing. [MJ-1023/1024] | Ch.5.1.7 [2] |
| EA50 | | Stapling jam: Stapling is not performed properly. [MJ-1022/1023/1024] | Ch.5.1.7 [2] |
| EA60 | | Early arrival jam: The inlet sensor detects the paper earlier than a specified timing. [MJ-1022/1023/1024] | Ch.5.1.7 [2] |
| EA70 | | Stack delivery jam: It cannot deliver the stack of paper on the intermediary process tray to the stack tray. [MJ-1022] | Ch.5.1.7 [2] |
| EA80 | | Finisher jam (Saddle stitcher section) | Stapling jam: Stapling is not performed properly. [MJ-1024] |
| EA90 | Door open jam: The delivery cover or inlet cover has opened during printing [MJ-1024]. | | Ch.5.1.7 [3] |
| EAA0 | Power-ON jam: Paper exists at No.1 paper sensor, No. 2 paper sensor, No.3 paper sensor, vertical path paper sensor or delivery sensor when power is turned ON. [MJ-1024] | | Ch.5.1.7 [3] |
| EAB0 | Transport stop jam: The paper which passed through the inlet sensor does not reach or pass No.1 paper sensor, No. 2 paper sensor, No.3 paper sensor or delivery sensor. [MJ-1024] | | Ch.5.1.7 [3] |
| EAC0 | Transport delay jam: The paper which has reached the inlet sensor does not pass through the inlet sensor. [MJ-1024] | | Ch.5.1.7 [3] |
| EAD0 | Other paper jam | | Print end command time-out jam: The printing has not finished normally because of the communication error between the SYS board and LGC board at the end of printing. |
| EAE0 | Finisher jam | Receiving time time-out jam: The printing has been interrupted because of the communication error between the equipment and finisher when the paper is transported from the equipment to the finisher. | Ch.5.1.7 [5] |

| Error code | Classification | Contents | Troubleshooting |
|-------------------|------------------------------------|--|------------------------|
| EAF0 | Finisher jam (Finisher section) | Stack return jam: It cannot load the paper which passed through the delivery roller on the intermediary process tray. [MJ-1022] | Ch.5.1.7 [2] |
| EB30 | Finisher jam | Ready time time-out jam: The equipment judges that the paper transport to the finisher is disabled because of the communication error between the equipment and finisher at the start of printing. | Ch.5.1.7 [5] |
| EB50 | Paper transport jam | Paper remaining on the transport path: The multiple feeding of preceding paper caused the misfeeding of upcoming paper. | Ch.5.1.3 |
| EB60 | | Paper remaining on the transport path: The multiple feeding of preceding paper caused the misfeeding of upcoming paper (redetection after no jam is detected at [EB50]). | Ch.5.1.3 |

2.1.2 Service call

| Error code | Classification | Contents | Troubleshooting | |
|------------|---|---|--|-----------|
| C010 | Drive system related service call | Main motor abnormality: The main motor is not rotating normally. | Ch.5.1.8 | |
| C020 | | Developer motor abnormality: The developer motor is not rotating normally. | Ch.5.1.8 | |
| C030 | | Transport motor abnormality: The transport motor is not rotating normally. | Ch.5.1.8 | |
| C040 | Paper feeding system related service call | PFP motor abnormality: The PFP motor is not rotating normally. (the case that paper can be fed from any drawer except the PFP) | Ch.5.1.9 | |
| C130 | | Upper drawer tray abnormality: The upper drawer tray-up motor is not rotating or the upper drawer tray is not moving normally. (the case that paper can be fed from any drawer except the upper drawer) | Ch.5.1.9 | |
| C140 | | Lower drawer tray abnormality: The lower drawer tray-up motor is not rotating or the lower drawer tray is not moving normally. (the case that paper can be fed from any drawer except the lower drawer) | Ch.5.1.9 | |
| C150 | | PFP upper drawer tray abnormality: The PFP upper drawer tray-up motor is not rotating or the PFP upper drawer tray is not moving normally. (the case that paper can be fed from any drawer except the PFP upper drawer) | Ch.5.1.9 | |
| C160 | | PFP lower drawer tray abnormality: The PFP lower drawer tray-up motor is not rotating or the PFP lower drawer tray is not moving normally. (the case that paper can be fed from any drawer except the PFP lower drawer) | Ch.5.1.9 | |
| C180 | | LCF tray-up motor abnormality: The LCF tray-up motor is not rotating or the LCF tray is not moving normally. (the case that paper can be fed from any drawer except the LCF) | Ch.5.1.9 | |
| C1A0 | | LCF end fence motor abnormality: The LCF end fence motor is not rotating or the LCF end fence is not moving normally. (the case that paper can be fed from any drawer except the LCF) | Ch.5.1.9 | |
| C1B0 | | LCF transport motor abnormality: The LCF transport motor is not rotating normally. (the case that paper can be fed from any drawer except the LCF) | Ch.5.1.9 | |
| C260 | | Scanning system related service call | Peak detection error: Lighting of the exposure lamp (white reference) is not detected when power is turned ON. | Ch.5.1.10 |
| C270 | | | Carriage home position sensor not turning OFF within a specified period of time: The carriage does not shift from its home position in a specified time. | Ch.5.1.10 |
| C280 | Carriage home position sensor not turning ON within a specified period of time: The carriage does not reach to its home position in a specified period of time. | | Ch.5.1.10 | |
| C360 | Copy process related service call | Charger cleaner motor abnormality: Charger cleaner motor is not rotating or wire cleaner is not moving normally. | Ch.5.1.18 | |

| Error code | Classification | Contents | Troubleshooting |
|------------|--|--|--|
| C411 | Fuser unit related service call | Thermistor or heater abnormality at power-ON: Abnormality of the thermistor is detected when power is turned ON or the temperature of the fuser roller does not rise in a specified period of time after power is turned ON. | Ch.5.1.11 |
| C412 | | Thermistor/heater abnormality at power-ON: Thermistor abnormality is detected at power-ON or the fuser roller temperature does not rise within a specified period of time after power-ON. | Ch.5.1.11 |
| C443 | | Heater abnormality after abnormality judgment (not reaching to intermediate temperature) | Ch.5.1.11 |
| C445 | | Heater abnormality after abnormality judgment (pre-running end temperature abnormality) | Ch.5.1.11 |
| C446 | | Heater abnormality after abnormality judgment (pre-running end temperature abnormality) | Ch.5.1.11 |
| C447 | | Heater abnormality after abnormality judgment (temperature abnormality at ready status) | Ch.5.1.11 |
| C449 | | Heater abnormality after abnormality judgment (overheating) | Ch.5.1.11 |
| C471 | | IH power voltage abnormality or IH initial abnormality (IH board initial abnormality) | Ch.5.1.11 |
| C472 | | IH power voltage abnormality (power supply abnormality) | Ch.5.1.11 |
| C475 | | IH power voltage abnormality (power supply abnormality when door is opened) | Ch.5.1.11 |
| C480 | | Overheating of IGBT: The temperature of the IGBT rises abnormally. | Ch.5.1.11 |
| C490 | | IH control circuit or IH coil abnormality: Abnormality is detected in IH control circuit or IH coil is broken/shorted. | Ch.5.1.11 |
| C4B0 | | Fuser unit counter abnormality | Ch.5.1.11 |
| C550 | | Optional communication related service call | RADF I/F error: Communication error has occurred between the RADF and the scanner. |
| C570 | Communication error between Engine-CPU and IPC board | | Ch.5.1.12 |
| C580 | Communication error between IPC board and finisher | | Ch.5.1.12 |
| C900 | Circuit related service call | Connection error between SYS board and LGC board | Ch.5.1.14 |
| C940 | | Engine-CPU abnormality | Ch.5.1.14 |
| C950 | | LGC board memory abnormality | Ch.5.1.14 |
| C960 | | Connection error between LGC board and DRV board, ID abnormality | Ch.5.1.14 |
| C970 | Process related service call | High-voltage transformer abnormality: Leakage of the main charger is detected. | Ch.5.1.18 |
| C9E0 | Circuit related service call | Connection error between SLG board and SYS board, ID abnormality | Ch.5.1.14 |
| CA10 | Laser optical unit related service call | Polygonal motor abnormality: The polygonal motor is not rotating normally. | Ch.5.1.15 |
| CA20 | | H-Sync detection error: H-Sync signal detection PC board cannot detect laser beams. | Ch.5.1.15 |

| Error code | Classification | Contents | Troubleshooting |
|------------|-------------------------------|---|-----------------|
| CB20 | Finisher related service call | Delivery motor abnormality: Delivery motor or delivery roller is not rotating normally. [MJ-1022] | Ch.5.1.16 |
| CB30 | | Tray 1/Tray 2 shift motor abnormality: Tray 1/Tray 2 shift motor is not rotating or delivery tray is not moving normally. [MJ-1023/1024] | Ch.5.1.16 |
| CB40 | | Rear aligning plate motor abnormality: Rear aligning plate motor is not rotating or aligning plate is not moving normally. [MJ-1023/1024] | Ch.5.1.16 |
| CB50 | | Staple motor abnormality: Staple motor is not rotating or stapler is not moving normally. [MJ-1022/1023/1024] | Ch.5.1.16 |
| CB60 | | Stapler shift motor abnormality: Stapler shift motor is not rotating or staple unit is not moving normally. [MJ-1023/1024] | Ch.5.1.16 |
| CB80 | | Backup RAM data abnormality: 1) Abnormality of checksum value on finisher controller PC board is detected when the power is turned ON. [MJ-1023/1024] 2) Abnormality of checksum value on punch controller PC board is detected when the power is turned ON. [MJ-1023/1024 (when MJ-6004 is installed)] | Ch.5.1.16 |
| CB90 | | Paper pushing plate motor abnormality: Paper pushing plate motor is not rotating or paper pushing plate is not moving normally. [MJ-1024] | Ch.5.1.16 |
| CBA0 | | Stitch motor (front) abnormality: Stitch motor (front) is not rotating or rotary cam is not moving normally. [MJ-1024] | Ch.5.1.16 |
| CBB0 | | Stitch motor (rear) abnormality: Stitch motor (rear) is not rotating or rotary cam is not moving normally. [MJ-1024] | Ch.5.1.16 |
| CBC0 | | Alignment motor abnormality: Alignment motor is not rotating or aligning plate is not moving normally. [MJ-1024] | Ch.5.1.16 |
| CBD0 | | Guide motor abnormality: Guide motor is not rotating or guide is not moving normally. [MJ-1024] | Ch.5.1.16 |
| CBE0 | | Paper folding motor abnormality: Paper folding motor or paper folding roller is not rotating normally. [MJ-1024] | Ch.5.1.16 |
| CBF0 | | Paper positioning plate motor abnormality: Paper positioning plate motor is not rotating or paper positioning plate is not moving normally. [MJ-1024] | Ch.5.1.16 |
| CC00 | | Sensor connector abnormality: Connector of guide home position sensor, paper pushing plate home position sensor or paper pushing plate top position sensor is disconnected. [MJ-1024] | Ch.5.1.16 |
| CC10 | | Micro switch abnormality: With all covers closed, inlet door switch, delivery door switch or front cover switch is open. [MJ-1024] | Ch.5.1.16 |

| Error code | Classification | Contents | Troubleshooting |
|------------|------------------------------------|---|-----------------|
| CC20 | Finisher related service call | Communication error between finisher and saddle stitcher: Communication error between finisher controller PC board and saddle stitcher controller board [MJ-1023/1024] | Ch.5.1.16 |
| CC30 | | Stack processing motor abnormality: The stack processing motor is not rotating or the stack delivery belt is not moving normally. [MJ-1022] | Ch.5.1.16 |
| CC40 | | Swing motor abnormality: Swing motor is not rotating or swing unit is not moving normally. [MJ-1023/1024] | Ch.5.1.16 |
| CC50 | | Horizontal registration motor abnormality: Horizontal registration motor is not rotating or puncher is not shifting normally. [MJ-1023/1024 (when MJ-6004 is installed)] | Ch.5.1.16 |
| CC60 | | Punch motor abnormality: Punch motor is not rotating or puncher is not shifting normally. [MJ-1023/1024 (when MJ-6004 is installed)] | Ch.5.1.16 |
| CC80 | | Front alignment motor abnormality: Front alignment motor is not rotating or front aligning plate is not moving normally. [MJ-1022] Front aligning plate motor abnormality: Front aligning plate motor is not rotating or aligning plate is not moving normally. [MJ-1023/1024] | Ch.5.1.16 |
| CC90 | | Upper stack tray lift motor abnormality: The upper stack tray lift motor is not rotating or the upper stack tray is not moving normally. [MJ-1022] | Ch.5.1.16 |
| CCA0 | | Lower stack tray lift motor abnormality: The lower stack tray lift motor is not rotating or the lower stack tray is not moving normally. [MJ-1022] | Ch.5.1.16 |
| CCB0 | | Rear jogging motor abnormality: The rear jogging motor is not rotating or the rear jogging plate is not moving normally. [MJ-1022] | Ch.5.1.16 |
| CCD0 | | Stack ejection motor abnormality: Stack ejection motor or stack ejection roller is not rotating normally. [MJ-1023/1024] | Ch.5.1.16 |
| CCE0 | | Paper trailing edge assist motor abnormality: Paper trailing edge assist motor is not rotating or paper trailing edge assist is not moving normally. [MJ-1023/1024] | Ch.5.1.16 |
| CCF0 | | Gear changing motor abnormality: Gear changing motor is not rotating normally. [MJ-1023/1024] | Ch.5.1.16 |
| CE00 | | Communication error between finisher and punch unit: Communication error between finisher controller PC board and punch controller PC board [MJ-1023/1024 (when MJ-6004 is installed)] | Ch.5.1.16 |
| CE10 | Image control related service call | Image quality sensor abnormality (OFF level): The output value of this sensor is out of a specified range when sensor light source is OFF. | Ch.5.1.17 |
| CE20 | | Image quality sensor abnormality (no pattern level): The output value of this sensor is out of a specified range when the image quality control test pattern is not formed. | Ch.5.1.17 |
| CE40 | | Image quality control test pattern abnormality: The test pattern is not formed normally. | Ch.5.1.17 |
| CE50 | | Temperature/humidity sensor abnormality: The output value of this sensor is out of a specified range. | Ch.5.1.17 |
| CE90 | | Drum thermistor abnormality: The output value of the drum thermistor is out of a specified range. | Ch.5.1.17 |

| Error code | Classification | Contents | Troubleshooting |
|------------|--|--|-----------------|
| CEA0 | Copy process related service call | Revolver home position detection abnormality: It cannot detect that the revolver is at its home position. | Ch.5.1.18 |
| CEB0 | | Black developer unit lifting movement abnormality: The black developer unit does not move up or down normally (lifting cam does not operate normally). | Ch.5.1.18 |
| CEC0 | Copy process related service call | 2nd transfer roller position detection abnormality: The 2nd transfer roller does not contact/release normally. | Ch.5.1.18 |
| CEE0 | | Transfer belt position detection abnormality (normal speed): The home position of the transfer belt cannot be detected. | Ch.5.1.18 |
| CEE1 | | Transfer belt position detection abnormality (when decelerating): Reference position of the transfer belt cannot be detected. | Ch.5.1.18 |
| CEF0 | | Revolver motor abnormality: Revolver motor is not rotating or revolver is not moving normally. | Ch.5.1.18 |
| CF20 | Toner density control related service call | Toner density detection voltage abnormality: The output value of the color auto-toner sensor in printing is out of a specified range. | Ch.5.1.19 |
| CF30 | | Reference plate detection voltage abnormality: The output value of the color auto-toner sensor against the reference plate is out of a specified range at the light amount correction during an auto-toner adjustment or when a print job has finished. | Ch.5.1.19 |
| CF40 | | Light amount correction voltage abnormality: The light amount correction is not finished normally during an auto-toner adjustment or when a print job has finished, or the output value of the sensor is out of a specified range when the light amount correction has finished. | Ch.5.1.19 |
| CF50 | | Color auto-toner sensor abnormality: The connection of the color auto-toner sensor cannot be detected at the initialization, or the output value of color auto-toner sensor when the revolver starts rotating for initialization is out of a specified range. | Ch.5.1.19 |
| F070 | Communication related service call | Communication error between System-CPU and Engine-CPU | Ch.5.1.12 |
| F090 | Circuit related service call | SRAM abnormality on the SYS board | Ch.5.1.14 |
| F091 | | NVRAM abnormality on the SYS board | Ch.5.1.14 |
| F092 | | SRAM and NVRAM abnormality on the SYS board | Ch.5.1.14 |
| F100 | Other service call | HDD format error: HDD cannot be initialized normally. | Ch.5.1.20 |
| F101 | | HDD unmounted: Connection of HDD cannot be detected. | Ch.5.1.20 |
| F102 | | HDD start error: HDD cannot become 'Ready' state. | Ch.5.1.20 |
| F103 | | HDD transfer time-out: Reading/writing cannot be performed in the specified period of time. | Ch.5.1.20 |
| F104 | | HDD data error: Abnormality is detected in the data of HDD. | Ch.5.1.20 |
| F105 | | HDD other error | Ch.5.1.20 |
| F106 | | Point and Print partition damage | Ch.5.1.20 |
| F107 | | /BOX partition damage | Ch.5.1.20 |
| F108 | /SHA partition damage | Ch.5.1.20 | |

| Error code | Classification | Contents | Troubleshooting |
|-------------------|------------------------------------|---|------------------------|
| F110 | Communication related service call | Communication error between System-CPU and Scanner-CPU | Ch.5.1.12 |
| F111 | | Scanner response abnormality | Ch.5.1.12 |
| F120 | Other service call | Database abnormality: Database is not operating normally. | Ch.5.1.20 |
| F130 | | Invalid MAC address | Ch.5.1.20 |
| F200 | | Data overwrite kit (GP-1060) is taken off | Ch.5.1.20 |
| F350 | Circuit related service call | SLG board abnormality | Ch.5.1.14 |

2.1.3 Error in Internet FAX / Scanning Function

1) Internet FAX related error

| Error code | Classification | Troubleshooting |
|------------|---|-----------------|
| 1C10 | System access abnormality | Ch.5.1.21 [1] |
| 1C11 | Insufficient memory | Ch.5.1.21 [1] |
| 1C12 | Message reception error | Ch.5.1.21 [1] |
| 1C13 | Message transmission error | Ch.5.1.21 [1] |
| 1C14 | Invalid parameter | Ch.5.1.21 [1] |
| 1C15 | Exceeding file capacity | Ch.5.1.21 [1] |
| 1C20 | System management module access abnormality | Ch.5.1.21 [1] |
| 1C21 | Job control module access abnormality | Ch.5.1.21 [1] |
| 1C22 | Job control module access abnormality | Ch.5.1.21 [1] |
| 1C30 | Directory creation failure | Ch.5.1.21 [1] |
| 1C31 | File creation failure | Ch.5.1.21 [1] |
| 1C32 | File deletion failure | Ch.5.1.21 [1] |
| 1C33 | File access failure | Ch.5.1.21 [1] |
| 1C40 | Image conversion abnormality | Ch.5.1.21 [1] |
| 1C60 | HDD full failure during processing | Ch.5.1.21 [1] |
| 1C61 | Address Book reading failure | Ch.5.1.21 [1] |
| 1C62 | Memory acquiring failure | Ch.5.1.21 [1] |
| 1C63 | Terminal IP address unset | Ch.5.1.21 [1] |
| 1C64 | Terminal mail address unset | Ch.5.1.21 [1] |
| 1C65 | SMTP address unset | Ch.5.1.21 [1] |
| 1C66 | Server time time-out error | Ch.5.1.21 [1] |
| 1C67 | NIC time time-out error | Ch.5.1.21 [1] |
| 1C68 | NIC access error | Ch.5.1.21 [1] |
| 1C69 | SMTP server connection error | Ch.5.1.21 [1] |
| 1C6A | HOST NAME error | Ch.5.1.21 [1] |
| 1C6B | Terminal mail address error | Ch.5.1.21 [1] |
| 1C6C | Destination mail address error | Ch.5.1.21 [1] |
| 1C6D | System error | Ch.5.1.21 [1] |
| 1C70 | SMTP client OFF | Ch.5.1.21 [1] |
| 1C71 | SMTP authentication error | Ch.5.1.21 [1] |
| 1C72 | POP before SMTP error | Ch.5.1.21 [1] |
| 1C80 | Internet FAX transmission failure when processing E-mail job received | Ch.5.1.21 [1] |
| 1C81 | Onramp Gateway transmission failure | Ch.5.1.21 [1] |
| 1C82 | Internet FAX transmission failure when processing FAX job received | Ch.5.1.21 [1] |
| 1CC0 | Job canceling | - |
| 1CC1 | Power failure | Ch.5.1.21 [1] |

2) RFC related error

| Error code | Message displayed in the TopAccess screen | Contents | Troubleshooting |
|-------------------|--|--|------------------------|
| 2500 | Syntax error, command unrecognized | HOST NAME error(RFC: 500) Destination mail address error (RFC: 500) Terminal mail address error (RFC: 500) | Ch.5.1.21 [2] |
| 2501 | Syntax error in parameters or arguments | HOST NAME error(RFC: 501) Destination mail address error (RFC: 501) Terminal mail address error (RFC: 501) | Ch.5.1.21 [2] |
| 2503 | Bad sequence of commands | Destination mail address error (RFC: 503) | Ch.5.1.21 [2] |
| 2504 | Command parameter not implemented | HOST NAME error (RFC: 504) | Ch.5.1.21 [2] |
| 2550 | Mailbox unavailable | Destination mail address error (RFC: 550) | Ch.5.1.21 [2] |
| 2551 | User not local | Destination mail address error (RFC: 551) | Ch.5.1.21 [2] |
| 2552 | Insufficient system storage | Terminal/Destination mail address error (RFC: 552) | Ch.5.1.21 [2] |
| 2553 | Mailbox name not allowed | Destination mail address error (RFC: 553) | Ch.5.1.21 [2] |

3) Electronic Filing related error

| Error code | Message displayed in the TopAccess screen | Contents | Troubleshooting |
|------------|--|--|-----------------|
| 2B10 | There was no applicable job. | No applicable job error in job control module | Ch.5.1.21 [3] |
| 2B11 | Job status failed. | JOB status abnormality | Ch.5.1.21 [3] |
| 2B20 | Failed to access file. | File library function error | Ch.5.1.21 [3] |
| 2B30 | Insufficient disk space. | Insufficient disk space in /BOX partition | Ch.5.1.21 [3] |
| 2B31 | Failed to access Electronic Filing. | Status of specified Electronic Filing or folder is undefined or being created/deleted | Ch.5.1.21 [3] |
| 2B32 | Failed to print Electronic Filing document. | Electronic Filing printing failure: Specified document can not be printed because of client's access (being edited, etc.). | Ch.5.1.21 [3] |
| 2B50 | Failed to process image. | Image library error | Ch.5.1.21 [3] |
| 2B51 | Failed to process print image. | List library error | Ch.5.1.21 [3] |
| 2B71 | Document(s) expire(s) in a few days | Documents expiring in a few days exist | - |
| 2B80 | Hard Disk space for Electronic Filing nearly full. | Hard disk space in /BOX partition is nearly full (90%). | - |
| 2B90 | Insufficient Memory. | Insufficient memory capacity | Ch.5.1.21 [3] |
| 2BA0 | Invalid Box password specified. | Invalid Box password | Ch.5.1.21 [3] |
| 2BB0 | Job canceled | Job canceling | - |
| 2BB1 | Power failure occurred | Power failure | Ch.5.1.21 [3] |
| 2BC0 | System fatal error. | Fatal failure occurred | Ch.5.1.21 [3] |
| 2BC1 | Failed to acquire resource. | System management module resource acquiring failure | Ch.5.1.21 [3] |
| 2BD0 | Power failure occurred during e-Filing restoring. | Power failure occurred during restoring of Electronic Filing | Ch.5.1.21 [3] |
| 2BE0 | Failed to get machine parameter. | Machine parameter reading failure | Ch.5.1.21 [3] |
| 2BF0 | Maximum number of page range is reached. | Exceeding maximum number of pages | Ch.5.1.21 [3] |
| 2BF1 | Maximum number of document range is reached. | Exceeding maximum number of documents | Ch.5.1.21 [3] |
| 2BF2 | Maximum number of folder range is reached. | Exceeding maximum number of folders | Ch.5.1.21 [3] |

4) E-mail related error

| Error code | Message displayed in the TopAccess screen | Contents | Troubleshooting |
|-------------------|--|---|------------------------|
| 2C10 | Illegal Job status | System access abnormality | Ch.5.1.21 [4] |
| 2C11 | Not enough memory | Insufficient memory | Ch.5.1.21 [4] |
| 2C12 | Illegal Job status | Message reception error | Ch.5.1.21 [4] |
| 2C13 | Illegal Job status | Message transmission error | Ch.5.1.21 [4] |
| 2C14 | Invalid parameter specified | Invalid parameter | Ch.5.1.21 [4] |
| 2C15 | Message size exceeded limit or maximum size | Exceeding file capacity | Ch.5.1.21 [4] |
| 2C20 | Illegal Job status | System management module access abnormality | Ch.5.1.21 [4] |
| 2C21 | Illegal Job status | Job control module access abnormality | Ch.5.1.21 [4] |
| 2C22 | Illegal Job status | Job control module access abnormality | Ch.5.1.21 [4] |
| 2C30 | Failed to create directory | Directory creation failure | Ch.5.1.21 [4] |
| 2C31 | Failed to create file | File creation failure | Ch.5.1.21 [4] |
| 2C32 | Failed to delete file | File deletion failure | Ch.5.1.21 [4] |
| 2C33 | Failed to create file | File access failure | Ch.5.1.21 [4] |
| 2C40 | Failed to convert image file format | Image conversion abnormality | Ch.5.1.21 [4] |
| 2C60 | Failed to process your Job. Insufficient disk space. | HDD full failure during processing | Ch.5.1.21 [4] |
| 2C61 | Failed to read AddressBook | Address Book reading failure | Ch.5.1.21 [4] |
| 2C62 | Not enough memory | Memory acquiring failure | Ch.5.1.21 [4] |
| 2C63 | Invalid Domain Address | Terminal IP address unset | Ch.5.1.21 [4] |
| 2C64 | Invalid Domain Address | Terminal mail address unset | Ch.5.1.21 [4] |
| 2C65 | Failed to connect to SMTP server | SMTP address unset | Ch.5.1.21 [4] |
| 2C66 | Failed to connect to SMTP server | Server time time-out error | Ch.5.1.21 [4] |
| 2C67 | Failed to send E-Mail message | NIC time time-out error | Ch.5.1.21 [4] |
| 2C68 | Failed to send E-Mail message | NIC access error | Ch.5.1.21 [4] |
| 2C69 | Failed to connect to SMTP server | SMTP server connection error | Ch.5.1.21 [4] |
| 2C6A | Failed to send E-Mail message | HOST NAME error (No RFC error) | Ch.5.1.21 [4] |
| 2C6B | Invalid address specified in From: field | Terminal mail address error | Ch.5.1.21 [4] |
| 2C6C | Invalid address specified in To: field | Destination mail address error (No RFC error) | Ch.5.1.21 [4] |
| 2C6D | NIC system error | System error | Ch.5.1.21 [4] |
| 2C70 | SMTP service is not available | SMTP client OFF | Ch.5.1.21 [4] |
| 2C71 | Failed SMTP Authentication | SMTP authentication error | Ch.5.1.21 [4] |
| 2C72 | POP Before SMTP Authentication Failed | POP before SMTP error | Ch.5.1.21 [4] |
| 2C80 | Failed to process received E-mail job | E-mail transmission failure when processing E-mail job received | Ch.5.1.21 [4] |
| 2C81 | Failed to process received Fax job | Process failure of FAX job received | Ch.5.1.21 [4] |
| 2CC0 | Job canceled | Job canceling | - |
| 2CC1 | Power failure occurred | Power failure | Ch.5.1.21 [4] |

5) File sharing related error

| Error code | Message displayed in the TopAccess screen | Contents | Troubleshooting |
|------------|--|--|-----------------|
| 2D10 | Illegal Job status | System access abnormality | Ch.5.1.21 [5] |
| 2D11 | Not enough memory | Insufficient memory | Ch.5.1.21 [5] |
| 2D12 | Illegal Job status | Message reception error | Ch.5.1.21 [5] |
| 2D13 | Illegal Job status | Message transmission error | Ch.5.1.21 [5] |
| 2D14 | Invalid parameter specified | Invalid parameter | Ch.5.1.21 [5] |
| 2D15 | There are too many documents in the folder. Failed in creating new document. | Exceeding document number | Ch.5.1.21 [5] |
| 2D20 | Illegal Job status | System management module access abnormality | Ch.5.1.21 [5] |
| 2D21 | Illegal Job status | Job control module access abnormality | Ch.5.1.21 [5] |
| 2D22 | Illegal Job status | Job control module access abnormality | Ch.5.1.21 [5] |
| 2D30 | Failed to create directory | Directory creation failure | Ch.5.1.21 [5] |
| 2D31 | Failed to create file | File creation failure | Ch.5.1.21 [5] |
| 2D32 | Failed to delete file | File deletion failure | Ch.5.1.21 [5] |
| 2D33 | Failed to create file | File access failure | Ch.5.1.21 [5] |
| 2D40 | Failed to convert image file format | Image conversion abnormality | Ch.5.1.21 [5] |
| 2D60 | Failed to copy file | File library access abnormality | Ch.5.1.21 [5] |
| 2D61 | Invalid parameter specified | Invalid parameter | Ch.5.1.21 [5] |
| 2D62 | Failed to connect to network destination. Check destination path | File server connection error | Ch.5.1.21 [5] |
| 2D63 | Specified network path is invalid. Check destination path | Invalid network path | Ch.5.1.21 [5] |
| 2D64 | Logon to file server failed. Check username and password | Login failure | Ch.5.1.21 [5] |
| 2D65 | There are too many documents in the folder. Failed in creating new document. | Exceeding documents in folder: Creating new document is failed. | Ch.5.1.21 [5] |
| 2D66 | Failed to process your Job. Insufficient disk space. | HDD full failure during processing | Ch.5.1.21 [5] |
| 2D67 | FTP service is not available | FTP service not available | Ch.5.1.21 [5] |
| 2D68 | File Sharing service is not available | File sharing service not available | Ch.5.1.21 [5] |
| 2DA0 | Expired scan documents deleted from share folder. | Periodical deletion of scanned documents completed properly. | - |
| 2DA1 | Expired Sent Fax documents deleted from shared folder. | Periodical deletion of transmitted FAX documents completed properly. | - |
| 2DA2 | Expired Received Fax documents deleted from shared folder. | Periodical deletion of received FAX documents completed properly. | - |
| 2DA3 | Scanned documents in shared folder deleted upon user's request. | Manual deletion of scanned documents completed properly. | - |
| 2DA4 | Sent Fax Documents in shared folder deleted upon user's request. | Manual deletion of transmitted FAX documents completed properly. | - |
| 2DA5 | Received Fax Documents in shared folder deleted upon user's request. | Manual deletion of received FAX documents completed properly. | - |
| 2DA6 | Failed to delete file. | File deletion failure | Ch.5.1.21 [5] |
| 2DA7 | Failed to acquire resource. | Resource acquiring failure | Ch.5.1.21 [5] |
| 2DC0 | Job canceled | Job canceling | - |
| 2DC1 | Power failure occurred | Power failure | Ch.5.1.21 [5] |

6) E-mail reception related error

| Error code | Message displayed in the TopAccess screen | Contents | Troubleshooting |
|-------------------|---|--------------------------------------|------------------------|
| 3A10 | MIME Error has been detected in the received mail. | E-mail MIME error | Ch.5.1.21 [6] |
| 3A11 | MIME Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3A12 | MIME Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3A20 | Analyze Error has been detected in the received mail. | E-mail analysis error | Ch.5.1.21 [6] |
| 3A21 | Analyze Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3A22 | Analyze Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3A30 | Whole partial mails were not reached by timeout. | Partial mail time-out error | Ch.5.1.21 [6] |
| 3A40 | Partial Mail Error has been detected in the received mail. | Partial mail related error | Ch.5.1.21 [6] |
| 3A50 | HDD Full Error has been occurred in this mail. | Insufficient HDD capacity error | Ch.5.1.21 [6] |
| 3A51 | HDD Full Error has been occurred in this mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3A52 | HDD Full Error has been occurred in this mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3A60 | HDD Full Warning has been occurred in this mail. | Warning of insufficient HDD capacity | Ch.5.1.21 [6] |
| 3A61 | HDD Full Warning has been occurred in this mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3A62 | HDD Full Warning has been occurred in this mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3A70 | Receiving partial mail was aborted since the partial mail setting has been changed to Disable. | Warning of partial mail interruption | Ch.5.1.21 [6] |
| 3A80 | Partial mail was received during the partial mail setting is disabled. | Partial mail reception setting OFF | Ch.5.1.21 [6] |
| 3A81 | Partial mail was received during the partial mail setting is disabled. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3A82 | Partial mail was received during the partial mail setting is disabled. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3B10 | Format Error has been detected in the received mail. | E-mail format error | Ch.5.1.21 [6] |
| 3B11 | Format Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3B12 | Format Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |

| Error code | Message displayed in the TopAccess screen | Contents | Troubleshooting |
|-------------------|---|---------------------|------------------------|
| 3B20 | Content-Type Error has been detected in the received mail. | Content-Type error | Ch.5.1.21 [6] |
| 3B21 | Content-Type Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3B22 | Content-Type Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3B30 | Charset Error has been detected in the received mail. | Charset error | Ch.5.1.21 [6] |
| 3B31 | Charset Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3B32 | Charset Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3B40 | Decode Error has been detected in the received mail. | E-mail decode error | Ch.5.1.21 [6] |
| 3B41 | Decode Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3B42 | Decode Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C10 | Tiff Analyze Error has been detected in the received mail. | TIFF analysis error | Ch.5.1.21 [6] |
| 3C11 | Tiff Analyze Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C12 | Tiff Analyze Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C13 | Tiff Analyze Error has been detected in the received mail. | | Ch.5.1.21 [6] |
| 3C20 | Tiff Compression Error has been detected in the received mail. | E-mail format error | Ch.5.1.21 [6] |
| 3C21 | Tiff Compression Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C22 | Tiff Compression Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C30 | Tiff Resolution Error has been detected in the received mail. | Content-Type error | Ch.5.1.21 [6] |
| 3C31 | Tiff Resolution Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C32 | Tiff Resolution Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |

| Error code | Message displayed in the TopAccess screen | Contents | Troubleshooting |
|-------------------|--|---------------------------------------|------------------------|
| 3C40 | Tiff Paper Size Error has been detected in the received mail. | Charset error | Ch.5.1.21 [6] |
| 3C41 | Tiff Paper Size Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C42 | Tiff Paper Size Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C50 | Offramp Destination Error has been detected in the received mail. | E-mail decode error | Ch.5.1.21 [6] |
| 3C51 | Offramp Destination Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C52 | Offramp Destination Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C60 | Offramp Security Error has been detected in the received mail. | TIFF analysis error | Ch.5.1.21 [6] |
| 3C61 | Offramp Security Error has been detected in the received mail. This mail has been transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C62 | Offramp Security Error has been detected in the received mail. This mail could not be transferred to the administrator. | | Ch.5.1.21 [6] |
| 3C70 | Power Failure has been occurred in Email receiving. | Power failure error | Ch.5.1.21 [6] |
| 3D10 | SMTP Destination Error has been detected in the received mail. This mail was deleted. | Destination address error | Ch.5.1.21 [6] |
| 3D20 | Offramp Destination limitation Error has been detected in the received mail. | Offramp destination limitation error | Ch.5.1.21 [6] |
| 3D30 | Fax Board Error has been occurred in the received mail. | FAX board error | Ch.5.1.21 [6] |
| 3E10 | POP3 Connection Error has been occurred in the received mail. | POP3 server connection error | Ch.5.1.21 [6] |
| 3E20 | POP3 Connection Timeout Error has been occurred in the received mail. | POP3 server connection time-out error | Ch.5.1.21 [6] |
| 3E30 | POP3 Login Error has been occurred in the received mail. | POP3 login error | Ch.5.1.21 [6] |
| 3E40 | POP3 Login Error occurred in the received mail. | POP3 login method error | Ch.5.1.21 [6] |
| 3F00 | File I/O Error has been occurred in this mail. The mail could not be received until File I/O is recovered. | File I/O error | Ch.5.1.21 [6] |
| 3F10 | | | Ch.5.1.21 [6] |
| 3F20 | | | Ch.5.1.21 [6] |
| 3F30 | | | Ch.5.1.21 [6] |
| 3F40 | | | Ch.5.1.21 [6] |

2.1.4 Printer function error

Following codes are displayed at the end of the user name on the print job log screen.

| Error code | Contents | Troubleshooting |
|------------|---|-----------------|
| 402F | Page memory size error - 1200 dpi network print is performed by the equipment with 128 MB (standard) memory. | Ch.5.1.21 [6] |
| 4031 | HDD full during print - Large quantity image data by private print or invalid network print are saved in HDD. | Ch.5.1.21 [6] |
| 4032 | Private-print-only error: Jobs other than Private print jobs cannot be performed. | Ch.5.1.21 [6] |
| 4033 | Printing data storing limitation error: Printing with its data being stored to the HDD temporarily (Proof print, Private print, Scheduled print, etc.) cannot be performed. | Ch.5.1.21 [6] |
| 4034 | e-Filing storing limitation error: Printing with its data being stored to the HDD (print and e-Filing, print to e-Filing, etc.) cannot be performed. | Ch.5.1.21 [6] |
| 4035 | Local file storing limitation error: Network FAX or Internet FAX cannot be sent when "Local" is selected for the destination of the file to save. | Ch.5.1.21 [6] |
| 4036 | User authentication error: The user who intended to print a document is not registered as a user. | Ch.5.1.21 [6] |
| A221 | Print job cancellation - Print job (copy, list print, network print) is deleted from the print job screen. | Ch.5.1.21 [6] |
| A222 | Print job power failure - The power of the equipment is turned OFF during print job (copy, list print, network print). | Ch.5.1.21 [6] |
| A290 | Limit over error (Black): The numbers of output pages have exceeded those specified with both of the department code and the user code at the same time. | Ch.5.1.21 [6] |
| A291 | Limit over error (Black): The number of output pages has exceeded the one specified with the user code. | Ch.5.1.21 [6] |
| A292 | Limit over error (Black): The number of output pages has exceeded the one specified with the department code. | Ch.5.1.21 [6] |
| A2A0 | Limit over error (Color): The numbers of output pages have exceeded those specified with both of the department code and the user code at the same time. | Ch.5.1.21 [6] |
| A2A1 | Limit over error (Color): The number of output pages has exceeded the one specified with the user code. | Ch.5.1.21 [6] |
| A2A2 | Limit over error (Color): The number of output pages has exceeded the one specified with the department code. | Ch.5.1.21 [6] |

<<Error history>>

In the setting mode (08-253), the latest twenty groups of error data will be displayed.

Display example

| | | | | | |
|-------------|-----------------|---|------------|------------|--------------------|
| <u>EA10</u> | <u>99999999</u> | <u>05 06 14 17 57 32</u> | <u>064</u> | <u>064</u> | <u>23621000000</u> |
| Error code | Total counter | YY MM DD HH MM SS | MMM | NNN | ABCDEFGHIJLO |
| 4 digits | 8 digits | 12 digits (Year is indicated with its last two digits.) | 3 digits | 3 digits | 11 digits |

| | |
|-----|--|
| A | Paper source |
| | 0: Not selected 1: Bypass feed 2: LCF 3: Upper drawer 4: Lower drawer 5: PFP upper drawer 6: PFP lower drawer 7: Unused 8: Unused |
| B | Paper size code |
| | 0: A5/ST 1: A5-R 2: ST-R 3: LT, 4: A4 5: B5-R 6: LT-R 7: A4-R 8: OTHER/UNIV 9: B5, A: FOLIO/COMP B: LG C: B4 D: LD E: A3 F: 13"LG G: Unsed H: A6-R I: Post card J: 8.5"SQ K: A3-wide L: 305×457 mm M: 8K N: 16K-R O: 16K Z: Not selected |
| C | Sort mode/staple mode |
| | 0: Non-sort/Non-staple 1: Group 2: Sort 7: Front staple 8: Double staple 9: Rear staple A: Saddle stitch |
| D | ADF mode |
| | 0: Unused 1: AUTO FEED (SADF) 2: STACK FEED |
| E | APS/AMS mode |
| | 0: Not selected 1: APS 2: AMS |
| F | Duplex mode |
| | 0: Not selected 1: Book 2: Double-sided/Single-sided 4: Double-sided/Duplex copying 8: Single-sided/Duplex copying |
| G | Unused |
| H | Image shift |
| | 0: Unused 1: Book 2: Left 4: Right |
| I | Editing |
| | 0: Unused 1: Masking 2: Trimming 3: Mirror image 4: Unused |
| J | Edge erase/Dual-page |
| | 0: Unused 1: Edge erase 2: Dual-page 3: Edge erase & Dual-page |
| K | Unused |
| L | Function |
| | 0: Unused 1: Copying 2: FAX/Internet FAX transmission 3: FAX/Internet FAX/E-mail reception printing 4: Unused 5: Printing/List print 6: Scan/E-mail transmission |
| MMM | Primary scanning reproduction ratio (Display in hexadecimal) |
| | (Mx256)+(Mx16)+M |
| NNN | Secondary scanning reproduction ratio (Display in hexadecimal) |
| | (Nx256)+(Nx16)+N |
| O | Color mode |
| | 0: Auto color 1: Full color 2: Black 3: Unused 4: Twin color copy 5: Gray scale 6: Unused 7: Image smoothing |

2.2 Self-diagnosis Modes

| Mode | For start | Contents | For exit | Display |
|--------------------------|-------------------------|--|-------------------|--------------------------|
| Control panel check mode | [0]+[1]+ [POWER] | All LEDs on the control panel are lit, and all the LCD pixels blink. | [POWER] OFF/ON | - |
| Test mode | [0]+[3]+ [POWER] | Checks the status of input/output signals. | [POWER] OFF/ON | 100% C A4 TEST MODE |
| Test print mode | [0]+[4]+ [POWER] | Outputs the test patterns. | [POWER] OFF/ON | 100% P A4 TEST PRINT |
| Adjustment mode | [0]+[5]+ [POWER] | Adjusts various items. | [POWER] OFF/ON | 100% A A4 TEST MODE |
| Setting mode | [0]+[8]+ [POWER] | Sets various items. | [POWER] OFF/ON | 100% D TEST MODE |
| List print mode | [9]+[START]+ [POWER] | Prints out the data lists of the codes 05 and 08, PM support mode and pixel counter. | [POWER] OFF/ON | 100% UA A4 LIST PRINT |
| PM support mode | [6]+[START]+ [POWER] | Clears each counter. | [POWER] OFF/ON | 100% K TEST MODE |
| Firmware update mode | [8]+[9]+ [POWER] | Performs updating of the system firmware. | [POWER] OFF/ON | - |

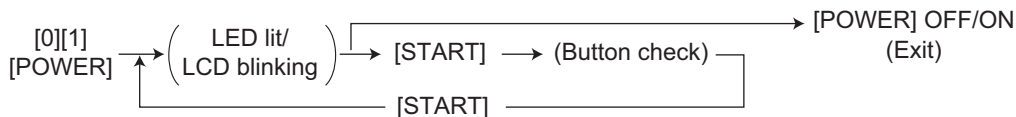
Note:

To enter the desired mode, turn ON the power while two digital keys designated to each mode (e.g. [0] and [5]) are pressed simultaneously.

To exit from Adjustment mode and Setting mode:
Shut down the equipment. When the power should be turned OFF, be sure to shut down the equipment by pressing the [ENERGY SAVER] button for a few seconds.

<Operation procedure>

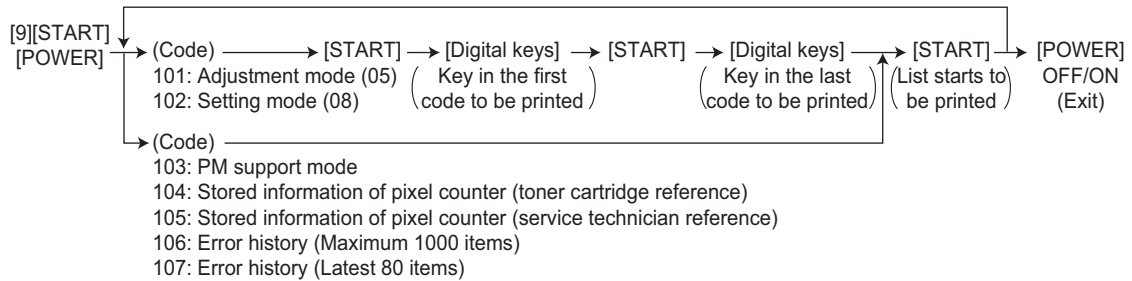
- Control panel check mode (01):



Notes:

- A mode can be canceled by [POWER] OFF/ON when the LED is lit and the LCD is blinking.
 - Button Check
 - Buttons with LED (Press to turn OFF the LED.)
 - Buttons without LED (Press to display the message on the control panel.)
 - Button on touch panel (Press to display the screen on the control panel at power-ON.)
- Test mode (03): Refer to “2.2.1. Input check (test mode 03)” and “2.2.2. Output check (test mode 03)”.
 - Test print mode (04): Refer to “2.2.3. Test print mode (04)”.
 - Adjustment mode (05): Refer to “2.2.4. Adjustment mode (05)”.
 - Setting mode (08): Refer to “2.2.5. Setting mode (08)”.

- List print mode (9S): The procedure varies depending on the code.



- PM support mode (6S):



- Firmware update mode (89): Refer to “6. FIRMWARE UPDATING”.

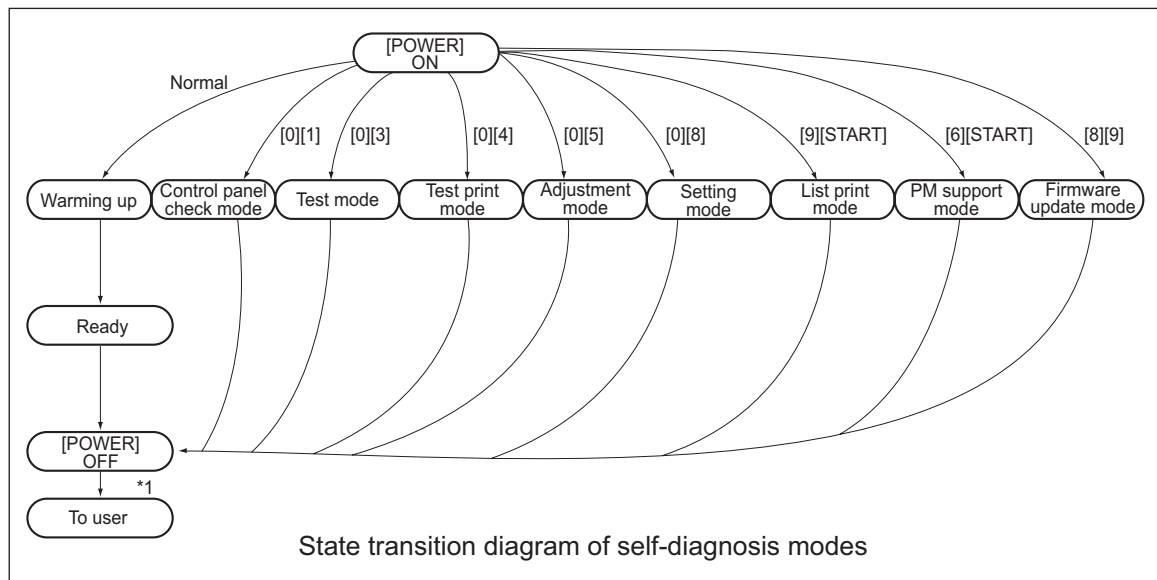


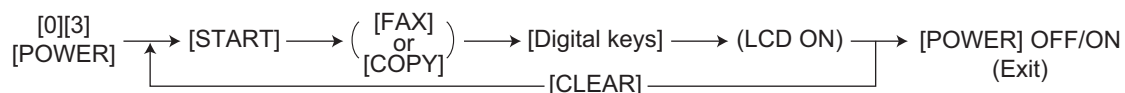
Fig.2-1

*1 Turn OFF the power after using the self-diagnosis mode, and leave the equipment to the user.

2.2.1 Input check (Test mode 03)

The status of each input signal can be checked by pressing the [FAX] button, [COPY] button and the digital keys in the test mode (03).

<Operation procedure>



Note:



Initialization is performed before the equipment enters the test mode.





Fig.2-2 Example of display during input check

Items to be checked and the condition of the equipment when the buttons [A] to [H] are highlighted are listed in the following pages.

[FAX] button: OFF/[COPY] button: OFF ([FAX] LED: OFF/[COPY] LED: OFF)

| Digital key | Button | Items to check | Contents | |
|-------------|--------|---|---|--|
| | | | Highlighted display e.g.  | Normal display e.g.  |
| [1] | A | Bypass unit connection | Not connected | Connected |
| | B | ADU connection | Not connected | Connected |
| | C | - | - | - |
| | D | LCF connection | Not connected | Connected |
| | E | - | - | - |
| | F | - | - | - |
| | G | - | - | - |
| | H | LCF drawer detection switch | Drawer not installed | Drawer present |
| [2] | A | PFP upper drawer detection switch | Drawer not installed | Drawer present |
| | B | - | - | - |
| | C | PFP upper drawer paper stock sensor | Paper almost empty | Paper present |
| | D | PFP upper drawer feed sensor | Paper present | No paper |
| | E | PFP connection | Not connected | Connected |
| | F | PFP side cover open/close switch | Cover opened | Cover closed |
| | G | PFP upper drawer empty sensor | No paper | Paper present |
| | H | PFP upper drawer tray-up sensor | Tray at upper limit position | Other than upper limit position |
| [3] | A | LCF tray bottom sensor | Tray at bottom position | Other than upper limit position |
| | B | LCF standby side paper misload detection sensor | Properly loaded | Paper misload |
| | C | - | - | - |
| | D | - | - | - |
| | E | - | - | - |
| | F | - | - | - |
| | G | - | - | - |
| | H | Paper stock sensor at LCF feed side | Paper present | No paper |
| [4] | A | PFP lower drawer detection switch | Drawer not installed | Drawer present |
| | B | - | - | - |
| | C | PFP lower drawer paper stock sensor | Paper almost empty | Paper present |
| | D | PFP lower drawer feed sensor | Paper present | No paper |
| | E | PFP motor rotation status (Motor is rotating at output mode (03)) | Abnormal rotation | Normal rotation |
| | F | - | - | - |
| | G | PFP lower drawer empty sensor | No paper | Paper present |
| | H | PFP lower drawer tray-up sensor | Tray at upper limit position | Other than upper limit position |

| Digital key | Button | Items to check | Contents | |
|-------------|--------|---|---|--|
| | | | Highlighted display e.g.  | Normal display e.g.  |
| [5] | A | LCF end fence home position sensor | Fence home position | Other than home position |
| | B | LCF end fence stop position sensor | Fence stop position | Other than stop position |
| | C | Empty sensor at LCF standby side | No paper | Paper present |
| | D | LCF side cover open/close switch | Cover closed | Cover opened |
| | E | LCF motor rotation status (Motor is rotating at output mode (03)) | Abnormal rotation | Normal rotation |
| | F | LCF tray-up sensor | Tray at upper limit position | Other than upper limit position |
| | G | LCF feed sensor | No paper | Paper present |
| | H | Empty sensor at LCF feed side | No paper | Paper present |
| [6] | A | Lower drawer detection switch | Drawer not installed | Drawer present |
| | B | Upper drawer detection switch | Drawer not installed | Drawer present |
| | C | Lower drawer paper stock sensor | Paper almost empty | Paper present |
| | D | Upper drawer paper stock sensor | Paper almost empty | Paper present |
| | E | Lower drawer empty sensor | No paper | Paper present |
| | F | Upper drawer empty sensor | No paper | Paper present |
| | G | Lower drawer tray-up sensor | Tray at upper limit position | Other than upper limit position |
| | H | Upper drawer tray-up sensor | Tray at upper limit position | Other than upper limit position |
| [7] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | Side cover open/close switch | Cover opened | Cover closed |
| | F | Front cover opening/closing switch | Cover opened | Cover closed |
| | G | - | - | - |
| | H | Exit sensor | Paper present | No paper |
| [8] | A | Bypass feed paper width sensor 3 (Refer to table1) | Bit 1 | Bit 0 |
| | B | Bypass feed paper width sensor 2 (Refer to table1) | Bit 1 | Bit 0 |
| | C | Bypass feed paper width sensor 1 (Refer to table1) | Bit 1 | Bit 0 |
| | D | Bypass feed paper width sensor 0 (Refer to table1) | Bit 1 | Bit 0 |
| | E | Bypass sensor | No paper | Paper present |
| | F | ADU opening/closing switch | ADU opened | ADU closed |
| | G | ADU exit sensor | Paper present | No paper |
| | H | ADU entrance sensor | Paper present | No paper |







| Digital key | Button | Items to check | Contents | |
|-------------|--------|-----------------------------|---|--|
| | | | Highlighted display e.g.  | Normal display e.g.  |
| [9] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | - | - | - |
| | F | Key copy counter connection | Not connected | Connected |
| | G | - | - | - |
| | H | - | - | - |
| [0] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | - | - | - |
| | F | - | - | - |
| | G | - | - | - |
| | H | - | - | - |



Table 1. Relation between the status of the bypass paper width sensor and paper size (width).

| Bypass paper width sensor | | | | Paper width size |
|---------------------------|---|---|---|------------------|
| 3 | 2 | 1 | 0 | |
| 0 | 1 | 1 | 1 | A3/LD |
| 1 | 0 | 1 | 1 | A4-R/LT-R |
| 1 | 1 | 0 | 1 | A5-R/ST-R |
| 1 | 1 | 1 | 0 | Card size |
| 0 | 0 | 1 | 1 | B4-R/LG |
| 1 | 0 | 0 | 1 | B5-R |



[FAX] button: ON/[COPY] button: OFF ([FAX] LED: ON/[COPY] LED: OFF)



| Digital key | Button | Items to check | Contents | |
|-------------|--------|--|---|--|
| | | | Highlighted display e.g.  | Normal display e.g.  |
| [1] | A | 2nd transfer roller position detection sensor | Released | Contacted |
| | B | Black developer contact timing detection sensor | Releasing movement | Contacting movement |
| | C | Black developer contact position detection sensor | Released position | Contacted position |
| | D | Main motor rotation status (Motor is rotating at Output Mode (03)) | Abnormal rotation | Normal rotation |
| | E | Developer motor rotation status (Motor is rotating at Output Mode (03)) | Abnormal rotation | Normal rotation |
| | F | Transport motor rotation status (Motor is rotating at Output Mode (03)) | Abnormal rotation | Normal rotation |
| | G | Polygonal motor rotation status (Motor is rotating at Output Mode (03)) | Abnormal rotation | Normal rotation |
| | H | 24V Power supply | Power OFF | Power ON |
| [2] | A | IPC board connection | Not connected | Connected |
| | B | Color toner cartridge sensor | Normally | Installation fault |
| | C | Revolver home position sensor | Home position | Other than home position |
| | D | - | - | - |
| | E | - | - | - |
| | F | Toner bag full detection sensor | Toner bag full | Not full |
| | G | Black auto-toner sensor connection | Not connected | Connected |
| | H | - | - | - |
| [3] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | - | - | - |
| | F | - | - | - |
| | G | Lower drawer feed sensor | No paper | Paper present |
| | H | Upper drawer feed sensor | Paper present | No paper |
| [4] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | Bridge unit connection | Not connected | Connected |
| | F | Color auto-toner sensor connection | Not connected | Connected |
| | G | - | - | - |
| | H | - | - | - |

| Digital key | Button | Items to check | Contents | |
|-------------|--------|------------------------------------|---|--|
| | | | Highlighted display e.g.  | Normal display e.g.  |
| [5] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | - | - | - |
| | F | RADF connection | RADF connected | Not connected |
| | G | Platen sensor | Platen cover opened | Platen cover closed |
| | H | Carriage home position sensor | Home position | Other than home position |
| [6] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | APS sensor (APS-R) | No original | Original present |
| | E | APS sensor (APS-C) | No original | Original present |
| | F | APS sensor (APS-3) | No original | Original present |
| | G | APS sensor (APS-2) | No original | Original present |
| | H | APS sensor (APS-1) | No original | Original present |
| [7] | A | RADF tray sensor | Original present | No original |
| | B | RADF empty sensor | Original present | No original |
| | C | RADF jam access cover sensor | Cover opened | Cover closed |
| | D | RADF open/close sensor | RADF opened | RADF closed |
| | E | RADF exit sensor | Original present | No original |
| | F | RADF intermediate sensor | Original present | No original |
| | G | RADF read sensor | Original present | No original |
| | H | RADF registration sensor | Original present | No original |
| [8] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | RADF original length sensor | Original present | No original |
| | F | RADF original width sensor 1 | Original present | No original |
| | G | RADF original width sensor 2 | Original present | No original |
| | H | - | - | - |
| [9] | A | Black toner cartridge switch | Cartridge not installed | Cartridge installed |
| | B | - | - | - |
| | C | - | - | - |
| | D | Bypass feed sensor | No paper | Paper present |
| | E | Registration sensor | Paper present | No paper |
| | F | - | - | - |
| | G | - | - | - |
| | H | Transfer belt home position sensor | Home position | Other than home position |

| Digital key | Button | Items to check | Contents | |
|-------------|--------|---|---|--|
| | | | Highlighted display e.g.  | Normal display e.g.  |
| [0] | A | Bridge unit transport sensor 2 | Paper present | No paper |
| | B | Bridge unit cover open/close detection switch | Cover opened | Cover closed |
| | C | Bridge unit transport sensor 1 | Paper present | No paper |
| | D | Bridge unit paper full detection sensor | Paper not full | Paper full |
| | E | - | - | - |
| | F | Charger cleaner front position detection switch | Cleaner home position | Other than home position |
| | G | Charger cleaner rear position detection switch | Cleaner rear position | Other than rear position |
| | H | - | - | - |

[FAX] button: OFF/[COPY] button: ON ([FAX] LED: OFF/[COPY] LED: ON)

| Digital key | Button | Items to check | Contents | |
|-------------|--------|--|---|--|
| | | | Highlighted display e.g.  | Normal display e.g.  |
| [1] | - | Temperature/humidity sensor (displays temperature inside of the equipment) | - | Temperature [°C] |
| [2] | - | Temperature/humidity sensor (displays humidity inside of the equipment) | - | Humidity [%RH] |
| [3] | - | Drum thermistor (displays drum surface temperature) | - | Temperature [°C] |
| [4] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | - | - | - |
| | F | - | - | - |
| | G | - | - | - |
| | H | - | - | - |
| [5] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | - | - | - |
| | F | - | - | - |
| | G | - | - | - |
| | H | - | - | - |
| [6] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | - | - | - |
| | F | - | - | - |
| | G | - | - | - |
| | H | - | - | - |
| [7] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | - | - | - |
| | F | - | - | - |
| | G | - | - | - |
| | H | - | - | - |
| [8] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | - | - | - |
| | F | - | - | - |
| | G | - | - | - |
| | H | - | - | - |

| Digital key | Button | Items to check | Contents | |
|-------------|--------|--|---|--|
| | | | Highlighted display e.g.  | Normal display e.g.  |
| [9] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | - | - | - |
| | E | - | - | - |
| | F | - | - | - |
| | G | - | - | - |
| | H | - | - | - |
| [0] | A | - | - | - |
| | B | - | - | - |
| | C | - | - | - |
| | D | Dongles for other equipments / Other USB devices | Connectable | Not connectable |
| | E | Judgement for acceptable USB storage device (*1) | Acceptable | Not acceptable |
| | F | - | - | - |
| | G | - | - | - |
| | H | - | - | - |

*1

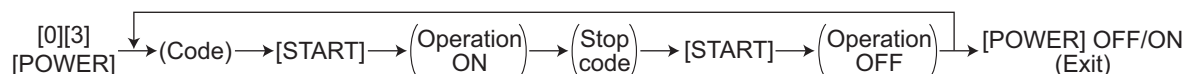
- Be sure to install the USB storage device to the equipment and check if the device can be used with this code.
- Be sure to turn OFF the write protection (the function to prevent data from erasure by the accidental recording or deleting) of the USB storage device before performing the check, otherwise this code cannot be used.
- It may take some time (2 sec. to 10 sec.) before this check is completed depending on the USB storage device.

2.2.2 Output check (test mode 03)

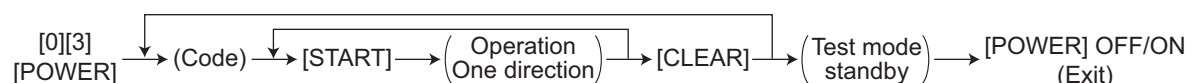
Status of the output signals can be checked by entering the following codes in the test mode 03.

<Operation procedure>

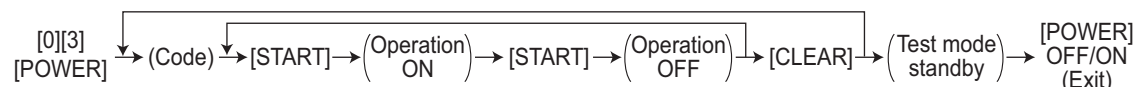
Procedure 1



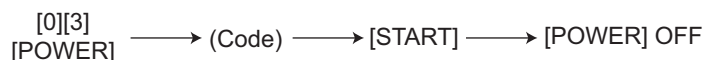
Procedure 2



Procedure 3



Procedure 4



| Code | Function | Code | Function | Procedure |
|------|--|------|--------------------------|-----------|
| 101 | Main motor ON (Operational without black developer unit) | 151 | Code No.101 function OFF | 1 |
| 102 | Toner motor K (normal rotation) ON | 152 | Code No.102 function OFF | 1 |
| 103 | Polygonal motor (600dpi) ON | 153 | Code No.103 function OFF | 1 |
| 108 | Registration clutch ON | 158 | Code No.108 function OFF | 1 |
| 109 | PFP motor ON | 159 | Code No.109 function OFF | 1 |
| 110 | ADU motor ON | 160 | Code No.110 function OFF | 1 |
| 112 | Developer motor ON (Operational with black developer unit) | 162 | Code No.112 function OFF | 1 |
| 115 | Drum cleaning brush motor ON | 165 | Code No.115 function OFF | 1 |
| 116 | Transfer belt cleaner auger motor ON | 166 | Code No.116 function OFF | 1 |
| 118 | Laser ON | 168 | Code No.118 function OFF | 1 |
| 120 | Exit motor (normal rotation) ON | 170 | Code No.120 function OFF | 1 |
| 121 | Exit motor (reversal rotation) ON | 171 | Code No.121 function OFF | 1 |
| 122 | LCF motor ON | 172 | Code No.122 function OFF | 1 |
| 123 | Transport motor ON | 173 | Code No.123 function OFF | 1 |
| 124 | Toner motor K (reversal rotation) ON | 174 | Code No.124 function OFF | 1 |
| 125 | Color auto-toner sensor shutter solenoid ON (open) | 175 | Code No.125 function OFF | 1 |
| 126 | Color auto-toner sensor LED ON | 176 | Code No.126 function OFF | 1 |

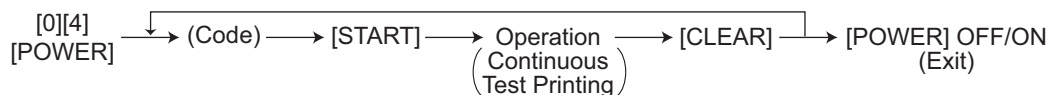
| Code | Function | Procedure |
|------|--|-----------|
| 201 | Upper drawer feed clutch ON/OFF | 3 |
| 202 | Lower drawer feed clutch ON/OFF | 3 |
| 203 | Lower transport clutch (high speed) ON/OFF | 3 |
| 204 | Bypass feed clutch ON/OFF | 3 |
| 205 | Lower transport clutch (low speed) ON/OFF | 3 |
| 206 | LCF pickup solenoid ON/OFF | 3 |
| 207 | LCF end fence reciprocating movement | 2 |
| 208 | LCF end fence motor ON/OFF | 3 |
| 209 | LCF feed clutch ON/OFF | 3 |
| 210 | LCF transport clutch ON/OFF | 3 |
| 218 | Key copy counter count up | 2 |
| 222 | ADU clutch ON/OFF | 3 |
| 225 | PFP transport clutch ON/OFF | 3 |
| 226 | PFP upper drawer feed clutch ON/OFF | 3 |
| 228 | PFP lower drawer feed clutch ON/OFF | 3 |
| 232 | Bridge unit gate solenoid ON/OFF | 3 |
| 235 | Discharge LED ON/OFF | 3 |
| 241 | IH board cooling fan (low speed) ON/OFF | 3 |
| 242 | Upper drawer tray-up motor ON (tray up) | 2 |
| 243 | Lower drawer tray-up motor ON (tray up) | 2 |
| 248 | Developer bias (Black) [+DC] ON/OFF | 3 |
| 249 | Developer bias (Black) [-DC] ON/OFF | 3 |
| 252 | Main charger ON/OFF | 3 |
| 261 | Scan motor ON (Automatically stops at limit position, speed can be changed by using ZOOM button) | 2 |
| 264 | SLG board cooling fan / Scanner unit cooling fan ON (high/low speed) | 1 |
| 265 | SLG board cooling fan / Scanner unit cooling fan OFF | 1 |
| 267 | Scanner exposure lamp ON/OFF | 3 |
| 268 | Laser unit cooling fan (high speed) ON/OFF | 3 |
| 271 | LCF tray-up motor UP/DOWN | 2 |
| 278 | PFP upper drawer tray-up motor ON (tray up) | 2 |
| 280 | PFP lower drawer tray-up motor ON (tray up) | 2 |
| 281 | RADF feed motor ON/OFF (normal rotation) | 3 |
| 282 | RADF feed motor ON/OFF (reverse rotation) | 3 |
| 283 | RADF read motor ON/OFF | 3 |
| 284 | RADF exit/reverse motor ON/OFF (normal rotation) | 3 |
| 285 | RADF exit/reverse motor ON/OFF (reverse rotation) | 3 |
| 294 | RADF reverse solenoid ON/OFF | 3 |
| 295 | Power OFF mode (for 200V series) | 4 |
| 297 | RADF fan motor ON/OFF | 3 |
| 410 | Power supply cooling fan (low speed) ON/OFF | 3 |
| 411 | Power supply cooling fan (high speed) ON/OFF | 3 |

| Code | Function | Procedure |
|-------------|--|------------------|
| 412 | Internal cooling fan ON/OFF (low speed) | 3 |
| 413 | Internal cooling fan ON/OFF (high speed) | 3 |
| 416 | IH board cooling fan (high speed) ON/OFF | 3 |
| 417 | Ozone exhaust fan (low speed) ON/OFF | 3 |
| 418 | Ozone exhaust fan (high speed) ON/OFF | 3 |
| 419 | Developer bias (Black) [AC] ON/OFF | 3 |
| 420 | Developer bias (Color) [+DC] ON/OFF | 3 |
| 421 | Developer bias (Color) [-DC1] ON/OFF | 3 |
| 422 | Developer bias (Color) [AC] ON/OFF | 3 |
| 424 | 1st transfer roller bias [+] ON/OFF | 3 |
| 425 | 1st transfer roller bias [-] ON/OFF | 3 |
| 426 | 2nd transfer roller bias [+] ON/OFF | 3 |
| 427 | 2nd transfer roller bias [-] ON/OFF | 3 |
| 428 | Drum cleaning blade bias ON/OFF | 3 |
| 430 | Image quality sensor shutter solenoid ON/OFF | 3 |
| 431 | Color developer drive clutch ON/OFF | 3 |
| 432 | Black developer drive clutch ON/OFF | 3 |
| 433 | Black developer lifting clutch ON/OFF | 3 |
| 435 | 2nd transfer roller contact clutch ON/OFF | 3 |
| 437 | Transfer belt cleaner clutch ON/OFF | 3 |
| 439 | Upper transport clutch (high speed) ON/OFF | 3 |
| 440 | Upper transport clutch (low speed) ON/OFF | 3 |
| 442 | Color developer toner supply clutch ON/OFF | 3 |
| 450 | Revolver motor ON/OFF (printing operation) | 3 |
| 451 | Revolver motor operation (at standby position) | 2 |
| 452 | Revolver motor operation (at toner cartridge Y access position) | 2 |
| 453 | Revolver motor operation (at toner cartridge M access position) | 2 |
| 454 | Revolver motor operation (at toner cartridge C access position) | 2 |
| 455 | Revolver motor operation (at developer unit Y access position) | 2 |
| 456 | Revolver motor operation (at developer unit M access position) | 2 |
| 457 | Revolver motor operation (at developer unit C access position) | 2 |
| 458 | Revolver motor operation (at home position) | 2 |
| 459 | Revolver motor operation (at developing position) | 2 |
| 460 | Black developer unit lifting movement ON/OFF (continuous lifting movement) | 3 |
| 461 | Charger cleaner motor movement (one reciprocating movement) | 2 |

2.2.3 Test print mode (test mode 04)

The embedded test pattern can be printed out by keying in the following codes in the test print mode (04).

<Procedure 1>



<Procedure 2>



Notes:

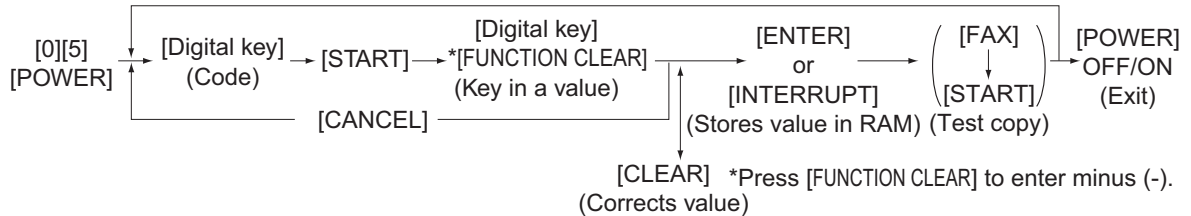
1. When an error occurs, it is indicated on the panel, but the recovery operation is not performed.
Turn OFF the power and then back ON to clear the error.
2. During test printing, the [CLEAR] button is disabled when "Wait adding toner" is displayed.

| Code | Types of test pattern | Remarks | Remarks |
|------|--|--|---------|
| 142 | Grid pattern (black) | Pattern width: 2 dots, Pitch: 10 mm | 1 |
| 204 | Grid pattern (color) | Pattern width: 1 dot, Pitch: 10 mm | 2 |
| 219 | 6% test pattern | | 2 |
| 220 | 8% test pattern | | 2 |
| 231 | Secondary scanning direction 33 gradation steps | 3 pixels standard, Width: 10 mm | 2 |
| 237 | Halftone | | 2 |
| 262 | Pattern for jitter evaluation (4 lines ON / 4 lines OFF) | 1 pixel standard, for color deviation correction | 2 |
| 270 | Image quality control test pattern | For checking the image quality control | 2 |

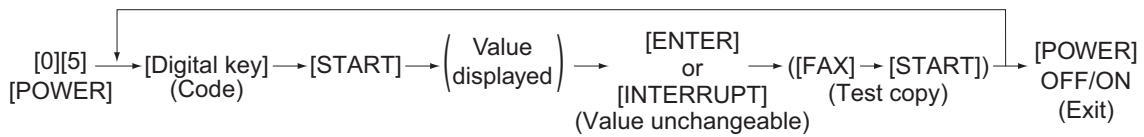
2.2.4 Adjustment mode (05)

Items in the adjustment mode list in the following pages can be corrected or changed in this adjustment mode (05). Turn ON the power with pressing the digital keys [0] and [5] simultaneously in order to enter this mode. When the power should be turned OFF, be sure to shut down the equipment by pressing the [ENERGY SAVER] button for a few seconds.

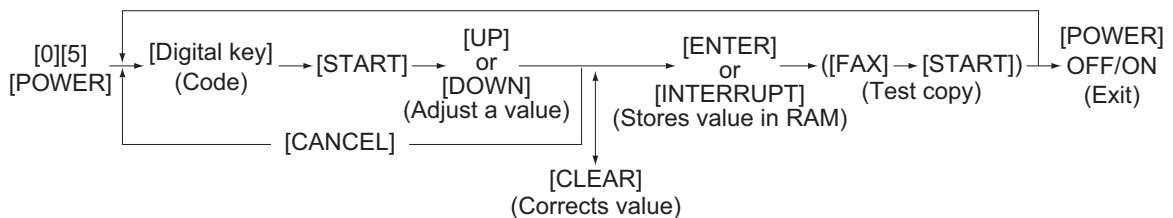
Procedure 1



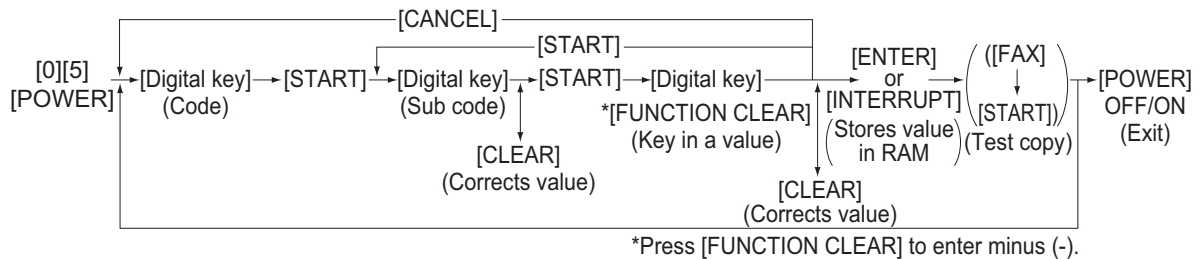
Procedure 2



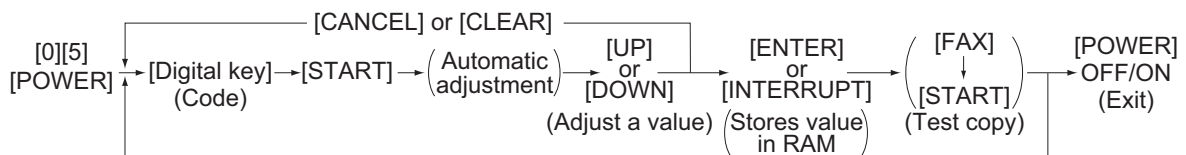
Procedure 3



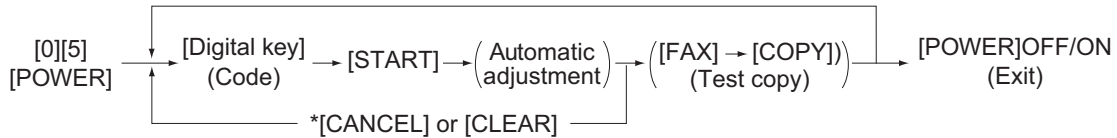
Procedure 4



Procedure 5

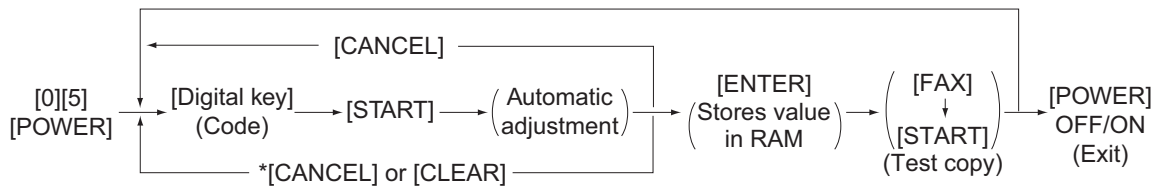


Procedure 6



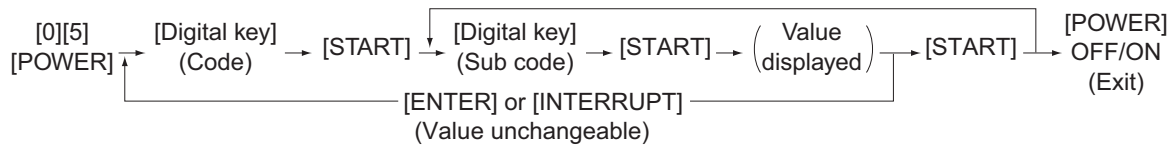
- * When the automatic adjustment ends abnormally, an error message is displayed.
- * Return to standby screen by pressing the [CANCEL] or [CLEAR] button.

Procedure 7

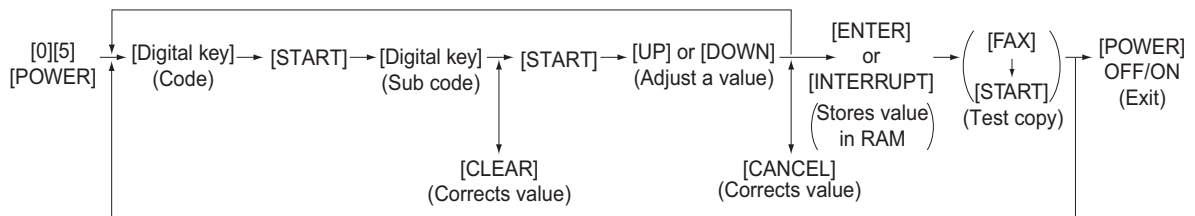


- * When the automatic adjustment ends abnormally, an error message is displayed.
- * Return to standby screen by pressing the [CANCEL] or [CLEAR] button.

Procedure 10



Procedure 14



Note:

The fuser roller temperature control at the adjustment mode is different from that at the normal state. Therefore, the problem of fusing efficiency may be occurred in the test copy at the adjustment mode. In that case, turn ON the power normally, leave the equipment for approx. 3 minutes after it has become ready state and then start up the adjustment mode again.

Test print pattern in Adjustment Mode (05)

Operation:

One test print is printed out when the [FAX] button is pressed after the code is keyed in at Standby Screen.

| Code | Types of test pattern | Remarks |
|------|---|---|
| 1 | Grid pattern (Black) | Refer to 3.4.3 Printer related adjustment |
| 3 | Grid pattern (Black/Duplex printing) | Refer to 3.4.3 Printer related adjustment |
| 4 | For gamma adjustment (Color/Black integrated pattern) | Refer to 3.5.1 Automatic gamma adjustment |
| 5 | For gamma adjustment (Color) | Refer to 3.5.1 Automatic gamma adjustment |
| 6 | For gamma adjustment (Black) | For checking the gradation reproduction |
| 7 | For gamma adjustment (Color) | For checking the gradation reproduction |
| 10 | For gamma adjustment (Black) | Refer to 3.5.1 Automatic gamma adjustment |
| 12 | Secondary scanning direction 33 gradation steps (Y) | For checking the image of printer section |
| 13 | Secondary scanning direction 33 gradation steps (M) | For checking the image of printer section |
| 14 | Secondary scanning direction 33 gradation steps (C) | For checking the image of printer section |
| 15 | Secondary scanning direction 33 gradation steps (K) | For checking the image of printer section |
| 47 | Gamma adjustment for printer (PS/ 600 x 600 dpi) | Refer to 3.6.1 Automatic gamma adjustment |
| 48 | Gamma adjustment for printer (PS/ 1,200 x 600 dpi) | Refer to 3.6.1 Automatic gamma adjustment |
| 49 | Gamma adjustment for printer (PCL/ 600 x 600 dpi) | Refer to 3.6.1 Automatic gamma adjustment |
| 50 | Gamma adjustment for printer (PCL/ 1,200 x 600 dpi) | Refer to 3.6.1 Automatic gamma adjustment |
| 51 | Gamma checking for printer (PS/ 600 x 600 dpi) | For checking the gradation reproduction |
| 52 | Gamma checking for printer (PS/ 1,200 x 600 dpi) | For checking the gradation reproduction |
| 55 | Grid pattern (Full Color / Thick paper 2) | Refer to 3.4.2 Paper alignment at the registration roller |
| 56 | Grid pattern (Full Color / Thick paper 3) | Refer to 3.4.2 Paper alignment at the registration roller |
| 57 | Grid pattern (Full Color / OHP) | Refer to 3.4.2 Paper alignment at the registration roller |
| 58 | Grid pattern (Black / Thick paper 2) | Refer to 3.4.2 Paper alignment at the registration roller |
| 59 | Grid pattern (Black / Thick paper 3) | Refer to 3.4.2 Paper alignment at the registration roller |
| 60 | Grid pattern (Black / OHP) | Refer to 3.4.2 Paper alignment at the registration roller |
| 62 | For color deviation correction (Full Color) | Only for A3/LD size |
| 63 | For color deviation correction (Full Color) | Only for A3/LD size |
| 64 | For color deviation correction (Full Color) | Only for A3/LD size |
| 68 | For color deviation correction (Full Color) | Only for A4/LT size |
| 69 | For color deviation correction (Full Color) | Only for A4/LT size |

Notes:

1. The digit after the hyphen in “Code” of the following table is a sub code.
2. In “RAM”, the NVRAM of the board in which the data of each code is stored is indicated. “M” stands for the LGC board and “SYS” stands for the SYS board.

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|---------------------------|-------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 200 | Development | Initialization of color auto-toner sensor light amount correction target value | All (Y,M,C,K) | ALL | - <0-255> | M | The value starts changing approx. 3 minutes after this adjustment started. The value is automatically set during this adjustment (approx. 2 minutes). (As the value increases, the sensor output increases correspondingly.) (Ch.3.2) | 5 |
| 201 | | | Y | ALL | - <0-255> | M | | 5 |
| 202 | | | M | ALL | - <0-255> | M | | 5 |
| 203 | | | C | ALL | - <0-255> | M | | 5 |
| 204 | | | K | ALL | - <0-255> | M | | 5 |
| 206 | | | YMC | ALL | - <0-255> | M | | 5 |
| 207 | Development | Initialization of color auto-toner sensor light amount correction target value | | ALL (color) | - | M | Initializes the color auto-toner sensor light amount correction target value. | 6 |
| 208 | Development | Enforced correction of color auto-toner sensor light amount | | ALL (color) | - | M | Performs the color auto-toner sensor light amount correction forcibly. | 6 |
| 210 | Transfer | 1st transfer roller bias output adjustment (When not transferred) | | ALL | 225 <0-225> | M | When the value decreases, the 1st transfer roller bias output increases. The adjustment value becomes effective when the Setting Mode (08- 541, 549 and 551) is 0 (invalid). | 3 |
| 224 | Transfer | 2nd transfer roller bias output adjustment (When cleaning the roller [+]) | | ALL | 147 <0-187> | M | When the value decreases, the 2nd transfer roller bias output increases. | 3 |
| 225 | Transfer | 2nd transfer roller bias output adjustment (When cleaning the roller [-]) | | ALL | 229 <188-255> | M | When the value decreases, the 2nd transfer roller bias output increases. | 3 |
| 226 | Transfer | 2nd transfer roller bias output adjustment (Paper interval/When not transferred) | | ALL | 191 <188-255> | M | When the value decreases, the 2nd transfer roller bias output increases. | 3 |
| 227-0 | Transfer | 2nd transfer roller bias output adjustment (Plain paper) | Single side | ALL (black) | 159 <0-187> | M | When the value decreases, the 2nd transfer roller bias output increases. The adjustment value becomes effective when the Setting Mode (08- 544, 549 and 551) is 0 (invalid). | 14 |
| 227-1 | | | Reverse side at duplexing | ALL (black) | 134 <0-187> | M | | 14 |
| 227-2 | | | Single side | ALL (color) | 147 <0-187> | M | | 14 |
| 227-3 | | | Reverse side at duplexing | ALL (color) | 128 <0-187> | M | | 14 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|---------------------------|-------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 229-0 | Transfer | 2nd transfer roller bias output adjustment (Thick paper 1) | Single side | ALL (black) | 144 <0-187> | M | When the value decreases, the 2nd transfer roller bias output increases. The adjustment value becomes effective when the Setting Mode (08-544, 549 and 551) is 0 (invalid). | 14 |
| 229-1 | | | Reverse side at duplexing | ALL (black) | 119 <0-187> | M | | 14 |
| 229-2 | | | Single side | ALL (color) | 125 <0-187> | M | | 14 |
| 229-3 | | | Reverse side at duplexing | ALL (color) | 112 <0-187> | M | | 14 |
| 230-0 | Transfer | 2nd transfer roller bias output (Thick paper 2) | | ALL (black) | 153 <0-187> | M | When the value decreases, the 2nd transfer roller bias output increases. The adjustment value becomes effective when the Setting Mode (08-544, 549 and 551) is 0 (invalid). | 14 |
| 230-1 | | | | ALL (color) | 150 <0-187> | M | | 14 |
| 231-0 | Transfer | 2nd transfer roller bias output (Thick paper 3) | | ALL (black) | 131 <0-187> | M | When the value decreases, the 2nd transfer roller bias output increases. The adjustment value becomes effective when the Setting Mode (08-544, 549 and 551) is 0 (invalid). | 14 |
| 231-1 | | | | ALL (color) | 131 <0-187> | M | | 14 |
| 232-0 | Transfer | 2nd transfer roller bias output (OHP film) | | ALL (black) | 119 <0-187> | M | When the value decreases, the 2nd transfer roller bias output increases. The adjustment value becomes effective when the Setting Mode (08-544, 549 and 551) is 0 (invalid). | 14 |
| 232-1 | | | | ALL (color) | 119 <0-187> | M | | 14 |
| 234-0 | Transfer | 2nd transfer roller bias offsetting adjustment (Plain paper) | Single side | ALL (black) | 5 <0-10> | M | Sets the offset amount of 2nd transfer roller bias. 0: -500V 1: -400V 2: -300V 3: -200V 4: -100V 5: 0V 6: +100V 7: +200V 8: +300V 9: +400V 10: +500V | 4 |
| 234-1 | | | Reverse side at duplexing | ALL (black) | 5 <0-10> | M | | 4 |
| 234-2 | | | Single side | ALL (color) | 5 <0-10> | M | | 4 |
| 234-3 | | | Reverse side at duplexing | ALL (color) | 5 <0-10> | M | | 4 |
| 236-0 | Transfer | 2nd transfer roller bias offsetting adjustment (Thick paper 1) | Single side | ALL (black) | 5 <0-10> | M | Sets the offset amount of 2nd transfer roller bias. 0: -500V 1: -400V 2: -300V 3: -200V 4: -100V 5: 0V 6: +100V 7: +200V 8: +300V 9: +400V 10: +500V | 4 |
| 236-1 | | | Reverse side at duplexing | ALL (black) | 5 <0-10> | M | | 4 |
| 236-2 | | | Single side | ALL (color) | 5 <0-10> | M | | 4 |
| 236-3 | | | Reverse side at duplexing | ALL (color) | 5 <0-10> | M | | 4 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|-------|-------------|----------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 237-0 | Transfer | 2nd transfer roller bias off-setting adjustment (Thick paper 2) | | ALL (black) | 5 <0-10> | M | Sets the offsetting amount of 2nd transfer roller bias. 0: -1,000V 1: -800V 2: -600V 3: -400 V 4: -200V 5: 0 V 6: +200V 7: +400V 8: +600V 9: +800 V 10: +1,000V | 4 |
| 237-1 | | | | ALL (color) | 5 <0-10> | M | | 4 |
| 238-0 | Transfer | 2nd transfer roller bias off-setting adjustment (Thick paper 3) | | ALL (black) | 5 <0-10> | M | | 4 |
| 238-1 | | | | ALL (color) | 5 <0-10> | M | | 4 |
| 239-0 | Transfer | 2nd transfer roller bias off-setting adjustment (OHP film) | | ALL (black) | 5 <0-10> | M | | 4 |
| 239-1 | | | | ALL (color) | 5 <0-10> | M | | 4 |
| 241 | Main charger | Main charger grid bias adjustment | Y | ALL | 78 <0-255> | M | As the value increases, the transformer output increases. The adjustment value becomes effective only when the setting mode (08-549, 551, 556, 557) is 0 (invalid). | 3 |
| 242 | | | M | ALL | 84 <0-255> | M | | 3 |
| 243 | | | C | ALL | 87 <0-255> | M | | 3 |
| 244 | | | K | ALL | 94 <0-255> | M | | 3 |
| 245 | Transfer | 1st transfer roller bias off-setting | | ALL (black) | 5 <0-10> | M | Sets the offsetting amount of 1st transfer roller bias. 0: -500 V 1: -400 V 2: -300 V 3: -200 V 4: -100 V 5: 0 V 6: +100 V 7: +200 V 8: +300 V 9: +400 V 10: +500 V | 1 |
| 247 | Transfer | Temperature/humidity sensor Humidity display | | ALL | 50 <0-100> | M | The humidity of the inside of the equipment is displayed. [Unit: RH%] | 2 |
| 248 | Transfer | Drum thermistor Temperature display | | ALL | 23 <0-100> | M | The ambient temperature of the drum surface is displayed. [Unit: °C] | 2 |
| 250 | Transfer | 1st transfer roller bias output voltage | +Low | ALL | 4000 <3600-4400> | M | Transformer output setting of the 1st transfer roller bias. When replacing the high-voltage transformer, the values listed in attached data sheet are entered. (Unit: V) | 1 |
| 251 | | | +High | ALL | 400 <280-520> | M | | 1 |
| 252 | Transfer | 2nd transfer roller bias output voltage | +Low | ALL | 6000 <5400-6600> | M | Transformer output setting of the 2nd transfer roller bias (plus output). When replacing the high-voltage transformer, the values listed in attached data sheet are entered. (Unit: V) | 1 |
| 253 | | | +High | ALL | 500 <350-650> | M | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|---------------------------|-------------|----------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 254 | Transfer | 2nd transfer roller bias output voltage | -Low | ALL | -500 <-9999-0> | M | Transformer output setting of the 2nd transfer roller bias (minus output). When replacing the high-voltage transformer, the values listed in attached data sheet are entered. (Unit: V) | 1 |
| 255 | | | -High | ALL | -2000 <-9999-0> | M | | 1 |
| 270 | Transfer | Temperature/humidity sensor Temperature display | | ALL | 23 <0-100> | M | The temperature of the inside of the equipment is displayed. [Unit: °C] | 2 |
| 275 | Transfer | 2nd transfer roller bias actual value (When cleaning the roller) | (+) | ALL | 147 <0-255> | M | Displays the value of 2nd transfer roller bias when printing is operated. | 2 |
| 276 | | | (-) | ALL | 229 <0-255> | M | | 2 |
| 277-0 | Transfer | 2nd transfer roller bias actual value display (Plain paper) | Single side | ALL (black) | 159 <0-187> | M | Displays the value of 2nd transfer roller bias when printing is operated. | 10 |
| 277-1 | | | Reverse side at duplexing | ALL (black) | 134 <0-187> | M | | 10 |
| 277-2 | | | Single side | ALL (color) | 147 <0-187> | M | | 10 |
| 277-3 | | | Reverse side at duplexing | ALL (color) | 128 <0-187> | M | | 10 |
| 279-0 | Transfer | 2nd transfer roller bias actual value display (Thick paper 1) | Single side | ALL (black) | 144 <0-187> | M | Displays the value of 2nd transfer roller bias when printing is operated. | 10 |
| 279-1 | | | Reverse side at duplexing | ALL (black) | 119 <0-187> | M | | 10 |
| 279-2 | | | Single side | ALL (color) | 125 <0-187> | M | | 10 |
| 279-3 | | | Reverse side at duplexing | ALL (color) | 112 <0-187> | M | | 10 |
| 281 | Transfer | 1st transfer roller bias resistance detection control | | ALL | - <0-255> | M | The RMS value of the main charger grid bias is displayed.. | 2 |
| 284 | Transfer | Transfer belt cleaning unit contact timing adjustment | | ALL | 141 <88-168> | M | When the value increases, the contact timing of transfer belt cleaning unit is delayed. | 1 |
| 285 | Transfer | Transfer belt cleaning unit release timing adjustment | | ALL | 121 <88-168> | M | When the value increases, the release timing of transfer belt cleaning unit is delayed. | 1 |
| 290-0 | Transfer | 2nd transfer roller bias offsetting adjustment (Thick paper 2) | | ALL (black) | 153 <0-187> | M | Displays the value of 2nd transfer roller bias when printing is operated. | 10 |
| 290-1 | | ALL (color) | 150 <0-187> | M | 10 | | | |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|---------------------------|----------------------------------|----------------|---|---|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 291-0 | Transfer | 2nd transfer roller bias off-setting adjustment (Thick paper 3) | ALL (black) | 131 <0-187> | M | Displays the value of 2nd transfer roller bias when printing is operated. | 10 | |
| 291-1 | | | ALL (color) | 131 <0-187> | M | | 10 | |
| 292-0 | Transfer | 2nd transfer roller bias off-setting adjustment (OHP film) | ALL (black) | 119 <0-187> | M | Displays the value of 2nd transfer roller bias when printing is operated. | 10 | |
| 292-1 | | | ALL (color) | 119 <0-187> | M | | 10 | |
| 293-0 | Transfer | 2nd transfer roller bias correction of leading/trailing edge of paper | Plain paper | ALL | 85 <0-255> | M | Corrects the 2nd transfer roller bias output of leading/trailing edge of paper (05-227, 229, 230, 231 and 232). Correcting factor: % | 14 |
| 293-1 | | | Thick paper 1 | ALL | 75 <0-255> | M | | 14 |
| 293-2 | | | Thick paper 2 | ALL | 80 <0-255> | M | | 14 |
| 293-3 | | | Thick paper 3 | ALL | 80 <0-255> | M | | 14 |
| 293-4 | | | OHP film | ALL | 80 <0-255> | M | | 14 |
| 294-0 | Transfer | Actual value display of 2nd transfer roller bias of leading/trailing edge of paper (Plain paper) | Single side | ALL (black) | 164 <0-255> | M | Displays the value of 2nd transfer roller bias on the leading/trailing edge of paper when printing is performed. (The value corrected in 05-293 is displayed.) | 10 |
| 294-1 | | | Reverse side at duplexing | ALL (black) | 142 <0-255> | M | | 10 |
| 294-2 | | | Single side | ALL (color) | 153 <0-255> | M | | 10 |
| 294-3 | | | Reverse side at duplexing | ALL (color) | 137 <0-255> | M | | 10 |
| 296-0 | Transfer | Actual value display of 2nd transfer roller bias of leading/trailing edge of paper (Thick paper 1) | Single side | ALL (black) | 155 <0-255> | M | | 10 |
| 296-1 | | | Reverse side at duplexing | ALL (black) | 136 <0-255> | M | | 10 |
| 296-2 | | | Single side | ALL (color) | 141 <0-255> | M | | 10 |
| 296-3 | | | Reverse side at duplexing | ALL (color) | 131 <0-255> | M | | 10 |
| 297-0 | Transfer | Actual value display of 2nd transfer roller bias of leading/trailing edge of paper (Thick paper 2) | ALL (black) | 160 <0-255> | M | | 10 | |
| 297-1 | | | ALL (color) | 158 <0-255> | M | | 10 | |
| 298-0 | Transfer | Actual value display of 2nd transfer roller bias of leading/trailing edge of paper (Thick paper 3) | ALL (black) | 142 <0-255> | M | | 10 | |
| 298-1 | | | ALL (color) | 143 <0-255> | M | | 10 | |
| 299-0 | Transfer | Actual value display of 2nd transfer roller bias of leading/trailing edge of paper (OHP film) | ALL (black) | 133 <0-255> | M | Displays the value of 2nd transfer roller bias on the leading/trailing edge of paper when printing is performed. (The value corrected in 05-293 is displayed.) | 10 | |
| 299-1 | | | ALL (color) | 133 <0-255> | M | | 10 | |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|----------|----------------------------------|--------------|--|---|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 305 | Scanner | Image location adjustment of secondary scanning direction (scanner section) | ALL | 124 <92-164> | SYS | When the value increases by "1", the image shifts by approx. 0.137 mm toward the trailing edge of the paper. | 1 | |
| 306 | Scanner | Image location adjustment of secondary scanning direction (scanner section) | ALL | 113 <0-255> | SYS | When the value increases by "1", the image shifts by approx. 0.0423 mm toward the front side of the paper. | 1 | |
| 308 | Scanner | Distortion mode | ALL | - | - | Moves carriages to the adjusting position. (Ch.3.4.4) | 6 | |
| 330-0 | Image control | Image quality closed-loop control contrast voltage correction/ Mode 2 maximum number of time corrected | Y | ALL | 3 <0-255> | M | Sets the maximum correction number of time of the contrast voltage in the closed-loop control mode 2. | 4 |
| 330-1 | | | M | ALL | 3 <0-255> | M | | 4 |
| 330-2 | | | C | ALL | 3 <0-255> | M | | 4 |
| 330-3 | | | K | ALL | 3 <0-255> | M | | 4 |
| 331-0 | Image control | Image quality closed-loop control laser power correction/Mode 2 maximum number of time corrected | Y | ALL | 2 <0-255> | M | Sets the maximum correction number of time of the laser power in the closed-loop control mode 2. | 4 |
| 331-1 | | | M | ALL | 2 <0-255> | M | | 4 |
| 331-2 | | | C | ALL | 2 <0-255> | M | | 4 |
| 331-3 | | | K | ALL | 2 <0-255> | M | | 4 |
| 332-0 | Image control | Image quality closed-loop control contrast voltage correction/ Mode 1 maximum number of time corrected | Y | ALL | 1 <0-255> | M | Sets the maximum correction number of time of the contrast voltage in the closed-loop control mode 1. | 4 |
| 332-1 | | | M | ALL | 1 <0-255> | M | | 4 |
| 332-2 | | | C | ALL | 1 <0-255> | M | | 4 |
| 332-3 | | | K | ALL | 1 <0-255> | M | | 4 |
| 333-0 | Image control | Image quality closed-loop control laser power correction/Mode 1 maximum number of time corrected | Y | ALL | 1 <0-255> | M | Sets the maximum correction number of time of the laser power in the closed-loop control mode 1. | 4 |
| 333-1 | | | M | ALL | 1 <0-255> | M | | 4 |
| 333-2 | | | C | ALL | 1 <0-255> | M | | 4 |
| 333-3 | | | K | ALL | 1 <0-255> | M | | 4 |
| 334 | Image control | Main charger grid calibration voltage 1 (low) | ALL | 300 <210-390> | M | Transformer output calibration of the main charger grid bias. When replacing the high-voltage transformer, the values listed in attached data sheet are entered. (Unit: V) | 1 | |
| 335 | Image control | Main charger grid calibration voltage 2 (high) | ALL | 1000 <900-1100> | M | | 1 | |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|---------------------------|-------------|----------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 338 | Image control | Color developer bias DC (-) calibration voltage 1 (low) | | ALL | 100 <70-130> | M | Transformer output calibration of the color developer bias. When replacing the high-voltage transformer, the values listed in attached data sheet are entered. (Unit: V) | 1 |
| 339 | Image control | Color developer bias DC (-) calibration voltage 2 (high) | | ALL | 900 <810-990> | M | | 1 |
| 340 | Scanner | Reproduction ratio adjustment of secondary scanning direction (scanner section) | | ALL | 127 <0-255> | SYS | When the value increases by "1", the reproduction ratio in the secondary scanning direction (vertical to paper feeding direction) increases by approx. 0.223%. | 1 |
| 350 | Scanner | Shading position adjustment | Original glass | ALL | 128 <118-138> | SYS | 0.1369 mm/step | 1 |
| 351 | | | RADF | ALL | 128 <118-138> | SYS | | |
| 354 | RADF | Adjustment of RADF paper alignment | for single-sided original | ALL | 10 <0-20> | SYS | When the value increases by "1", the aligning amount increases by approx. 0.5 mm. | 1 |
| 355 | | | for double-sided original | ALL | 10 <0-20> | SYS | | 1 |
| 356 | RADF | Automatic adjustment of RADF sensor and EEPROM initialization | | ALL | - | SYS | Performs the adjustment and initialization when the RADF board or RADF sensor is replaced. | 6 |
| 357 | RADF | Fine adjustment of RADF transport speed | | ALL | 50 <0-100> | SYS | When the value increases by "1", the reproduction ratio of the secondary scanning direction on original (fed from the RADF) increases by approx. 0.1%. | 1 |
| 358 | RADF | RADF sideways deviation adjustment | | ALL | 128 <0-255> | SYS | When the value increases by "1", the image of original fed from the RADF shifts toward the rear side of paper by approx. 0.0423 mm. | 1 |
| 359 | Scanner | Carriage position adjustment during scanning from RADF | | ALL (black) | 128 <0-255> | SYS | When the value increases by "1", the carriage position shifts by approx. 0.1 mm toward the exit side when using the RADF. | 1 |
| 360 | | | | ALL (color) | 128 <0-255> | SYS | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|---------------------------|----------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 361 | Scanner | Log table switching for RADF copying | | ALL (color) | 0 <0-4> | SYS | 0: Same log table as the one used at copying with original glass 1: Background reproduction - Light 2 2: Background reproduction - Light 1 3: Background reproduction - Dark 1 4: Background reproduction - Dark 2 | 1 |
| 362 | | | | ALL (black) | 0 <0-4> | | | |
| 363 | Scanner | Data transfer of characteristic value of scanner / SYS board → SLG board | | SCN | - | SYS | Transfers the characteristic values of the scanner (shading correction factor / RGB color correction / reproduction ratio color aberration correction) from the NVRAM of the SYS board to the NVRAM of the SLG board. | 6 |
| 364 | Scanner | Data transfer of characteristic value of scanner / SLG board → SYS board | | SCN | - | SYS | Transfers the characteristic values of the scanner (shading correction factor / RGB color correction / reproduction ratio color aberration correction) from the NVRAM of the SLG board to the NVRAM of the SYS board. | 6 |
| 365 | RADF | RADF leading edge position 1 adjustment | for single-sided original | ALL | 50 <0-100> | SYS | When the value increases by "1", the copied image of original fed from the RADF shifts toward the trailing edge of paper by approx. 0.1 mm. | 1 |
| 366 | | | for double-sided original | ALL | 50 <0-100> | SYS | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|----------|----------------------------|-------------|--|---|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 367 | RADF | RADF original guide width adjustment (Minimum) | ALL | - | - | Stores the current width of RADF original guide by keying in this code with the guide set at the minimum width. Perform this adjustment when the RADF board or volume is replaced, or when the code (05-356) is performed. | 6 | |
| 368 | RADF | RADF original guide width adjustment (Maximum) | ALL | - | - | Stores the current width of RADF original guide by keying in this code with the guide set at the maximum width. Perform this adjustment when the RADF board or volume is replaced, or when the code (05-356) is performed. | 6 | |
| 372 | Image control | Black developer bias DC (-) calibration voltage 1 (low) | ALL | 100 <70-130> | M | Transformer output calibration of the black developer bias. When replacing the high-voltage transformer, the values listed in attached data sheet are entered. (Unit: V) | 1 | |
| 373 | Image control | Black developer bias DC (-) calibration voltage 2 (high) | ALL | 900 <810-990> | M | | 1 | |
| 380-0 | Image control | Image quality open-loop control/ contrast voltage initial value display | Y | ALL | 320 <0-999> | M | Displays the contrast voltage initial value set by the open-loop control. (Unit: V) | 10 |
| 380-1 | | | M | ALL | 330 <0-999> | M | | 10 |
| 380-2 | | | C | ALL | 340 <0-999> | M | | 10 |
| 380-3 | | | K | ALL | 375 <0-999> | M | | 10 |
| 381-0 | Image control | Contrast voltage actual value display | Y | ALL | 320 <0-999> | M | Displays the contrast voltage when printing is operated. (Unit: V) | 10 |
| 381-1 | | | M | ALL | 330 <0-999> | M | | 10 |
| 381-2 | | | C | ALL | 340 <0-999> | M | | 10 |
| 381-3 | | | K | ALL | 375 <0-999> | M | | 10 |
| 382-0 | Image control | Image quality open-loop control/ laser power initial value display | Y | ALL | 408 <0-999> | M | Displays the laser power initial value set by the open-loop control. (Unit: μW) | 10 |
| 382-1 | | | M | ALL | 408 <0-999> | M | | 10 |
| 382-2 | | | C | ALL | 408 <0-999> | M | | 10 |
| 382-3 | | | K | ALL | 408 <0-999> | M | | 10 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|------------------------------|----------------------------------|----------------|----------|---|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 383-0 | Image control | Laser power actual value display | Y | ALL | 92 <0-255> | M | Displays the laser power when printing is operated. (bit value) | 10 |
| 383-1 | | | M | ALL | 92 <0-255> | M | | 10 |
| 383-2 | | | C | ALL | 92 <0-255> | M | | 10 |
| 383-3 | | | K | ALL | 92 <0-255> | M | | 10 |
| 384-0 | Image control | Laser power actual value display | Y | ALL | 408 <0-999> | M | Displays the laser power when printing is operated. (Unit: μ W) | 10 |
| 384-1 | | | M | ALL | 408 <0-999> | M | | 10 |
| 384-2 | | | C | ALL | 408 <0-999> | M | | 10 |
| 384-3 | | | K | ALL | 408 <0-999> | M | | 10 |
| 385-0 | Image control | Main charger grid bias actual value display | Y | ALL | 78 <0-255> | M | Displays the main charger grid bias when printing is operated. (bit value) | 10 |
| 385-1 | | | M | ALL | 84 <0-255> | M | | 10 |
| 385-2 | | | C | ALL | 87 <0-255> | M | | 10 |
| 385-3 | | | K | ALL | 94 <0-255> | M | | 10 |
| 386-0 | Image control | Developer bias DC (-) actual value display | Y | ALL | 135 <0-255> | M | Displays the developer bias when printing is operated. (bit value) | 10 |
| 386-1 | | | M | ALL | 137 <0-255> | M | | 10 |
| 386-2 | | | C | ALL | 139 <0-255> | M | | 10 |
| 386-3 | | | K | ALL | 146 <0-255> | M | | 10 |
| 388 | Image control | Output value display of image quality sensor | When the light source is OFF | ALL | 0 <0-1023> | M | Displays the output value of image quality sensor when the sensor light source is OFF. | 2 |
| 389 | | | Transfer belt surface | ALL | 0 <0-1023> | M | Displays the output value of image quality sensor (when there is no test pattern) on the transfer belt. | 2 |
| 390-0 | | | High-density pattern Y | ALL | 0 <0-1023> | M | Displays the output value of image quality sensor when a high-density test pattern is written. The larger the value is, the smaller the toner amount adhered becomes. | 10 |
| 390-1 | | | High-density pattern M | ALL | 0 <0-1023> | M | | 10 |
| 390-2 | | | High-density pattern C | ALL | 0 <0-1023> | M | | 10 |
| 390-3 | | | High-density pattern K | ALL | 0 <0-1023> | M | | 10 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|----------------------|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 391-0 | Image control | Output value display of image quality sensor | Lowdensity pattern Y | ALL | 0 <0-1023> | M | Displays the output value of image quality sensor when a low-density test pattern is written. The larger the value is, the smaller the toner amount adhered becomes. | 10 |
| 391-1 | | | Lowdensity pattern M | ALL | 0 <0-1023> | M | | 10 |
| 391-2 | | | Lowdensity pattern C | ALL | 0 <0-1023> | M | | 10 |
| 391-3 | | | Lowdensity pattern K | ALL | 0 <0-1023> | M | | 10 |
| 392 | Image control | Light amount adjustment result of image quality sensor | | ALL | 0 <0-255> | M | The LED light amount adjustment value of this sensor is the reference value to set the reflected light from the belt surface. | 2 |
| 393 | Image control | Relative humidity display during latest closed-loop control | | ALL | 0 <0-100> | M | Displays the relative humidity at the latest performing of the closed-loop control. | 2 |
| 394 | Image control | Enforced performing of image quality open-loop control | | ALL | - | - | Performs the image quality open-loop control. | 6 |
| 395 | Image control | Enforced performing of image quality closed-loop control | | ALL | - | M | Performs the image quality closedloop control. | 6 |
| 396 | Image control | Image quality control initialization | | ALL | - | M | Performs the image quality control, initialize each control value. | 6 |
| 398-0 | Image control | Target value of the high image density control | Y | ALL | 265 <220-360> | M | Sets the target value of high image density control at the time of the image quality control. | 4 |
| 398-1 | | | M | ALL | 300 <220-360> | M | | 4 |
| 398-2 | | | C | ALL | 320 <220-360> | M | | 4 |
| 398-3 | | | K | ALL | 370 <300-420> | M | | 4 |
| 401 | Laser | Fine adjustment of polygonal motor rotation speed (reproduction ratio adjustment) | | PRT | 134 <0-255> | M | When the value increases by "1", the reproduction ratio of primary scanning direction increases by approx. 0.07%. (approx. 0.1 mm/step) | 1 |
| 405 | | | | PPC | 135 <0-255> | M | | 1 |
| 410 | Laser | Adjustment of primary scanning laser writing start position | | PPC | 128 <0-255> | M | When the value increases by "1", the writing start position shifts to the front side by approx. 0.0423 mm. | 1 |
| 411 | | | | PRT | 120 <0-255> | M | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|----------|----------------------------------|---|----------|---|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 417-0 | Image | Color deviation correction 1 (A3/LD) | K | ALL | 127 <118-138> | M | When the value increases by "1", the image shifts toward the trailing edge of the paper by 0.0423 mm. | 4 |
| 417-1 | | | C | ALL | 128 <118-138> | M | | 4 |
| 417-2 | | | M | ALL | 128 <118-138> | M | | 4 |
| 417-3 | | | Y | ALL | 128 <118-138> | M | | 4 |
| 418-0 | Image | Color deviation correction 2 (A3/LD) | K | ALL | 130 <118-138> | M | When the value increases by "1", the image shifts toward the trailing edge of the paper by 0.0423 mm. | 4 |
| 418-1 | | | C | ALL | 128 <118-138> | M | | 4 |
| 418-2 | | | M | ALL | 128 <118-138> | M | | 4 |
| 418-3 | | | Y | ALL | 128 <118-138> | M | | 4 |
| 421 | Drive | Adjustment of secondary scanning direction reproduction ratio (fine adjustment of main motor speed) | PPC/PRT | | 127 <0-255> | M | When the value increases by "1", the reproduction ratio of secondary scanning direction increases by approx. 0.04%. | 1 |
| 422 | | | FAX | | 128 <0-255> | M | | 1 |
| 424 | Drive | Fine adjustment of exit motor speed | PPC/PRT | | 107 <0-255> | M | When the value increases by "1", the rotation becomes faster by approx. 0.05%. | 1 |
| 425 | | | FAX | | EUR: 140 UC: 140 JPN: 128 Others: 140 <0-255> | M | | 1 |
| 426 | Drive | Adjustment of secondary scanning direction reproduction ratio (fine adjustment of transport motor speed) | PPC/PRT | | 138 <0-255> | M | When the value increases by "1", the reproduction ratio of secondary scanning direction increases by approx. 0.04%. | 1 |
| 427 | | | FAX | | 139 <0-255> | M | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|----------------|----------|---|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 430 | Image | Top margin adjustment (blank area at the leading edge of the paper) | | PPC | 26 <0-255> | M | When the value increases by "1", the blank area becomes wider by approx. 0.0423 mm. | 1 |
| 431 | Image | Left margin adjustment (blank area at the left of the paper along the paper feeding direction) | | PPC | 0 <0-255> | M | | 1 |
| 432 | Image | Right margin adjustment (blank area at the right of the paper along the paper feeding direction) | | PPC | 15 <0-255> | M | | 1 |
| 433 | Image | Bottom margin adjustment (blank area at the trailing edge of the paper) | | PPC | 43 <0-255> | M | | 1 |
| 434-0 | Image | Bottom margin adjustment (blank area at the trailing edge of the paper) /Reverse side at duplexing | | PPC/PRT | EUR: 45 UC: 28 JPN: 28 Others: 45 <0-255> | M | | 4 |
| 434-1 | Image | Right margin adjustment (blank area at the right of the paper along the paper feeding direction) /Reverse side at duplexing | | PPC/PRT | 18 <0-255> | M | 4 | |
| 435 | Image | Top margin adjustment (blank area at the leading edge of the paper) | | PRT | 24 <0-255> | M | 1 | |
| 436 | Image | Left margin adjustment (blank area at the left of the paper along the paper feeding direction) | | PRT | 0 <0-255> | M | When the value increases by "1", the blank area becomes wider by approx. 0.0423 mm. | 1 |
| 437 | Image | Right margin adjustment (blank area at the right of the paper along the paper feeding direction) | | PRT | 0 <0-255> | M | | 1 |
| 438 | Image | Bottom margin adjustment (blank area at the trailing edge of the paper) | | PRT | 0 <0-255> | M | | 1 |
| 439 | Image | Bottom margin adjustment (blank area at the trailing edge of the paper along the paper feeding direction) when paper size is not specified at bypass feed | | ALL | 128 <0-255> | M | When the value increases by "1", the margin increases by approx. 0.2 mm. | 1 |
| 440 | Laser | Secondary scanning laser writing start position | Upper drawer | ALL | 21 <0-40> | M | When the value increases by "1", the image shifts toward the trailing edge of the paper by approx. 0.2 mm. | 1 |
| 441 | | | Lower drawer | ALL | 47 <0-80> | M | | 1 |
| 442 | | | Bypass feeding | ALL | 22 <0-40> | M | | 1 |
| 443 | | | LCF | ALL | 20 <0-40> | M | | 1 |
| 444 | | | PFP | ALL | 20 <0-40> | M | | 1 |
| 445 | | | Duplex feeding | ALL | 21 <0-40> | M | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|--------------|----------------------------------|--------------|----------|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 448-0 | Paper feeding | Paper aligning amount adjustment at the registration section (PFP upper drawer / Plain paper) | Long size | ALL | 15 <0-63> | M | When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 204 mm or shorter | 4 |
| 448-1 | | | Middle size | ALL | 15 <0-63> | M | | 4 |
| 448-2 | | | Short size 1 | ALL | 15 <0-63> | M | | 4 |
| 448-3 | | | Short size 2 | ALL | 15 <0-63> | M | | 4 |
| 449-0 | Paper feeding | Paper aligning amount adjustment at the registration section (PFP lower drawer / Plain paper) | Long size | ALL | 15 <0-63> | M | | 4 |
| 449-1 | | | Middle size | ALL | 15 <0-63> | M | | 4 |
| 449-2 | | | Short size 1 | ALL | 15 <0-63> | M | | 4 |
| 449-3 | | | Short size 2 | ALL | 15 <0-63> | M | | 4 |
| 450-0 | Paper feeding | Paper aligning amount adjustment at the registration section (Upper drawer / Plain paper) | Long size | ALL | 18 <0-63> | M | | 4 |
| 450-1 | | | Middle size | ALL | 18 <0-63> | M | | 4 |
| 450-2 | | | Short size 1 | ALL | 18 <0-63> | M | | 4 |
| 450-3 | | | Short size 2 | ALL | 18 <0-63> | M | | 4 |
| 452-0 | Paper feeding | Paper aligning amount adjustment at the registration section (Lower drawer / Plain paper) | Long size | ALL | 18 <0-63> | M | When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 204 mm or shorter | 4 |
| 452-1 | | | Middle size | ALL | 18 <0-63> | M | | 4 |
| 452-2 | | | Short size 1 | ALL | 15 <0-63> | M | | 4 |
| 452-3 | | | Short size 2 | ALL | 15 <0-63> | M | | 4 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|-------------|----------|----------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 455-0 | Paper feeding | Paper aligning amount adjustment at the registration section (Duplex feeding / Plain paper) | Long size | ALL | 8 <0-63> | M | When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size: 219 mm or shorter * Postcard is supported only for JPN model. | 4 |
| 455-1 | | | Middle size | ALL | 8 <0-63> | M | | 4 |
| 455-2 | | | Short size | ALL | 12 <0-63> | M | | 4 |
| 457 | Paper feeding | Paper aligning amount adjustment at the registration section (LCF / Plain paper) | | ALL | 15 <0-63> | M | When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size: 219 mm or shorter * Postcard is supported only for JPN model. | 1 |
| 458-0 | Paper feeding | Paper aligning amount adjustment at the registration section (Bypass feeding/Plain paper) | Long size | ALL | 14 <0-63> | M | | 4 |
| 458-1 | | | Middle size | ALL | 14 <0-63> | M | | 4 |
| 458-2 | | | Short size | ALL | 14 <0-63> | M | 4 | |
| 460-0 | Paper feeding | Paper aligning amount adjustment at the registration section (Bypass feeding/Thick paper 1) | Long size | ALL | 16 <0-63> | M | When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size: 219 mm or shorter * Postcard is supported only for JPN model. | 4 |
| 460-1 | | | Middle size | ALL | 16 <0-63> | M | | 4 |
| 460-2 | | | Short size | ALL | 16 <0-63> | M | | 4 |
| 461-0 | Paper feeding | Paper aligning amount adjustment at the registration section (Bypass feeding/Thick paper 2) | Long size | ALL | 17 <0-63> | M | When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size: 219 mm or shorter * Postcard is supported only for JPN model. | 4 |
| 461-1 | | | Middle size | ALL | 17 <0-63> | M | | 4 |
| 461-2 | | | Short size | ALL | 17 <0-63> | M | | 4 |
| 462-0 | Paper feeding | Paper aligning amount adjustment at the registration section (Bypass feeding/Thick paper 3) | Long size | ALL | 17 <0-63> | M | When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size: 219 mm or shorter * Postcard is supported only for JPN model. | 4 |
| 462-1 | | | Middle size | ALL | 17 <0-63> | M | | 4 |
| 462-2 | | | Short size | ALL | 17 <0-63> | M | | 4 |
| 462-3 | | | Post card | ALL | 16 <0-63> | M | | 4 |
| 463-0 | Paper feeding | Paper aligning amount adjustment at the registration section (Bypass feeding/OHP film) | Long size | ALL | 16 <0-63> | M | When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size: 219 mm or shorter * Postcard is supported only for JPN model. | 4 |
| 463-1 | | | Middle size | ALL | 16 <0-63> | M | | 4 |
| 463-2 | | | Short size | ALL | 16 <0-63> | M | | 4 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|---------------|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 466-0 | Paper feeding | Adjustment of paper pushing amount / Bypass feeding | Plain paper | ALL | 143 <0-255> | M | When the value increases by "1", the driving speed of bypass feed roller increases by approx. 2 ms when the paper transport is started from the registration section. * Post card is supported only for JPN model. | 4 |
| 466-1 | | | Post card | ALL | 170 <0-255> | M | | 4 |
| 466-4 | | | Thick paper 1 | ALL | 143 <0-255> | M | | 4 |
| 466-5 | | | Thick paper 2 | ALL | 143 <0-255> | M | | 4 |
| 466-6 | | | Thick paper 3 | ALL | 143 <0-255> | M | | 4 |
| 466-7 | | | OHP film | ALL | 143 <0-255> | M | | 4 |
| 467 | Paper feeding | Adjustment of paper pushing amount/Duplex feeding (short size) | | ALL | 128 <0-255> | M | When the value increases by "1", the driving speed of ADU transport roller increases by approx. 2 ms when the paper transport is started from the registration section. | 1 |
| 468-0 | Finisher | Fine adjustment of binding position/folding position | A4-R /LT-R | ALL | 0 <-14-14> | M | When the value increases by "1", the binding/folding position shifts toward the right page by 0.25 mm. | 4 |
| 468-1 | | | B4 | ALL | 0 <-14-14> | M | | 4 |
| 468-2 | | | A3/LD | ALL | 0 <-14-14> | M | | 4 |
| 469-0 | Paper feeding | Paper aligning amount adjustment at the registration section (Upper drawer / Thick paper 1) | Long size | ALL | 18 <0-63> | M | When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 204 mm or shorter | 4 |
| 469-1 | | | Middle size | ALL | 18 <0-63> | M | | 4 |
| 469-2 | | | Short size 1 | ALL | 18 <0-63> | M | | 4 |
| 469-3 | | | Short size 2 | ALL | 18 <0-63> | M | | 4 |
| 470-0 | Paper feeding | Paper aligning amount adjustment at the registration section (Lower drawer / Thick paper 1) | Long size | ALL | 15 <0-63> | M | | 4 |
| 470-1 | | | Middle size | ALL | 15 <0-63> | M | | 4 |
| 470-2 | | | Short size 1 | ALL | 15 <0-63> | M | | 4 |
| 470-3 | | | Short size 2 | ALL | 15 <0-63> | M | | 4 |
| 471-0 | Paper feeding | Paper aligning amount adjustment at the registration section (PFP upper drawer / Thick paper 1) | Long size | ALL | 15 <0-63> | M | | 4 |
| 471-1 | | | Middle size | ALL | 15 <0-63> | M | | 4 |
| 471-2 | | | Short size 1 | ALL | 15 <0-63> | M | | 4 |
| 471-3 | | | Short size 2 | ALL | 15 <0-63> | M | | 4 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|---------------------------|----------|----------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 472-0 | Paper feeding | Paper aligning amount adjustment at the registration section (PFP lower drawer / Thick paper 1) | Long size | ALL | 15 <0-63> | M | When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size: 219 mm or shorter Short size 1: 205 mm to 219 mm Short size 2: 204 mm or shorter * Post card is supported only for JPN model. | 4 |
| 472-1 | | | Middle size | ALL | 15 <0-63> | M | | 4 |
| 472-2 | | | Short size 1 | ALL | 15 <0-63> | M | | 4 |
| 472-3 | | | Short size 2 | ALL | 15 <0-63> | M | | 4 |
| 473 | Paper feeding | Paper aligning amount adjustment at the registration section (LCF / Thick paper 1) | | ALL | 15 <0-63> | M | 220 mm to 329 mm Short size: 219 mm or shorter Short size 1: 205 mm to 219 mm Short size 2: 204 mm or shorter * Post card is supported only for JPN model. | 1 |
| 474-0 | Paper feeding | Paper aligning amount adjustment at the registration section (ADU / Thick paper 1) | Long size | ALL | 8 <0-63> | M | 205 mm to 219 mm Short size 2: 204 mm or shorter * Post card is supported only for JPN model. | 4 |
| 474-1 | | | Middle size | ALL | 8 <0-63> | M | | 4 |
| 474-2 | | | Short size | ALL | 12 <0-63> | M | | 4 |
| 475-0 | Paper feeding | Paper aligning amount adjustment at the registration section (Bypass feeding) | Thick paper 2 Long size | ALL | 28 <0-63> | M | | 4 |
| 475-1 | | | Thick paper 2 Middle size | ALL | 28 <0-63> | M | | 4 |
| 475-2 | | | Thick paper 2 Short size | ALL | 28 <0-63> | M | | 4 |
| 475-3 | | | Thick paper 3 Long size | ALL | 28 <0-63> | M | | 4 |
| 475-4 | | | Thick paper 3 Middle size | ALL | 28 <0-63> | M | | 4 |
| 475-5 | | | Thick paper 3 Short size | ALL | 28 <0-63> | M | | 4 |
| 475-6 | | | OHP film Long size | ALL | 24 <0-63> | M | | 4 |
| 475-7 | | | OHP film Middle size | ALL | 24 <0-63> | M | | 4 |
| 475-8 | | | OHP film Short size | ALL | 24 <0-63> | M | | 4 |
| 475-9 | | | Post card | ALL | 28 <0-63> | M | | 4 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|-------------------------------|-------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 494 | Laser | Secondary scanning data laser writing start position | When decelerating to 1/2 | ALL | 135 <0-255> | M | When the value increases by "1", the image shifts by approx. 0.2 mm toward the trailing edge of the paper. | 1 |
| 495 | | | When decelerating to 1/3 | ALL | 135 <0-255> | M | | 1 |
| 496 | | | When decelerating to 1/4 | ALL | 128 <0-255> | M | | 1 |
| 497-0 | Laser | Adjustment of drawer sideways deviation | Upper drawer | ALL | 128 <0-255> | M | When the value increases by "1", the image shifts toward the front side by 0.0423 mm. | 4 |
| 497-1 | | | Lower drawer | ALL | 128 <0-255> | M | | 4 |
| 497-2 | | | PFP upper drawer | ALL | 128 <0-255> | M | | 4 |
| 497-3 | | | PFP lower drawer | ALL | 128 <0-255> | M | | 4 |
| 497-4 | | | LCF | ALL | 128 <0-255> | M | | 4 |
| 497-5 | | | Bypass feeding | ALL | 128 <0-255> | M | | 4 |
| 498-0 | Laser | Adjustment of duplex feeding sideways deviation | Long size | ALL | 131 <0-255> | M | When the value increases by "1", the image shifts toward the front side by 0.0423 mm. | 4 |
| 498-1 | | | Short size (A4/LT or smaller) | ALL | 131 <0-255> | M | | 4 |
| 499 | Development | Black developer unit lift up/down timing adjustment | | ALL | 4 <0-255> | M | Change the lift up/down timing of the black developer unit when a CEB0 error occurs. (Ch.3.11.3) | 1 |
| 501 | Image | Density adjustment Fine adjustment of "manual density" /Center value | Photo | PPC (black) | 128 <0-255> | SYS | When the value increases, the image of the center step density becomes darker. | 1 |
| 503 | | | Text/Photo | PPC (black) | 128 <0-255> | SYS | | 1 |
| 504 | | | Text | PPC (black) | 128 <0-255> | SYS | | 1 |
| 505 | Image | Density adjustment Fine adjustment of "manual density" /Light step value | Text/Photo | PPC (black) | 20 <0-255> | SYS | Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "light" steps becomes lighter. | 1 |
| 506 | | | Photo | PPC (black) | 20 <0-255> | SYS | | 1 |
| 507 | | | Text | PPC (black) | 20 <0-255> | SYS | | 1 |
| 508 | Image | Density adjustment Fine adjustment of "manual density" /Dark step value | Text/Photo | PPC (black) | 20 <0-255> | SYS | Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "dark" steps becomes darker. | 1 |
| 509 | | | Photo | PPC (black) | 20 <0-255> | SYS | | 1 |
| 510 | | | Text | PPC (black) | 20 <0-255> | SYS | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|-------------|----------------------------|------------------------------------|---|---|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 512 | Image | Density adjustment Fine adjustment of "automatic density" | Photo | PPC (black) | 128 <0-255> | SYS | When the value increases, the image becomes darker. | 1 |
| 514 | | | Text/Photo | PPC (black) | 128 <0-255> | SYS | | 1 |
| 515 | | | Text | PPC (black) | 128 <0-255> | SYS | | 1 |
| 532 | Image | Range correction Background peak adjustment | Text/Photo | PPC (black) | 40 <0-255> | SYS | When the value increases, the background of the image (low density area) becomes harder to be printed out. | 1 |
| 533 | | | Photo | PPC (black) | 16 <0-255> | SYS | | 1 |
| 534 | | | Text | PPC (black) | 40 <0-255> | SYS | | 1 |
| 570 | Image | Range correction on original manually set on the original glass | Text/Photo | PPC (black) | 22 <11-14, 21-24, 31-34, 41-44> | SYS | Sets whether the values of the background peak and text peak are fixed or not. One's place is an adjustment for "automatic density" and ten's place is for "manual density". Once they are fixed, the range correction is performed with standard values. The values of the background peak and text peak affect the reproduction of the background density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak | 1 |
| 571 | | | Photo | PPC (black) | 12 <11-14, 21-24, 31-34, 41-44> | SYS | | 1 |
| 572 | | | Text | PPC (black) | 22 <11-14, 21-24, 31-34, 41-44> | SYS | | 1 |
| 580 | Image | Automatic gamma adjustment | PPC (black) | - | - | Adjusts the gradation reproduction automatically. | 7 | |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|------------|----------------------------------|----------------|----------|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 590-0 | Image | Adjustment of gamma balance (Text/Photo) | L | PPC (black) | 128 <0-255> | SYS | When the value increases, the density in the target area becomes higher. L : Low density area M : Medium density area H : High density area | 4 |
| 590-1 | | | M | PPC (black) | 128 <0-255> | SYS | | 4 |
| 590-2 | | | H | PPC (black) | 128 <0-255> | SYS | | 4 |
| 591-0 | Image | Adjustment of gamma balance (Text) | L | PPC (black) | 128 <0-255> | SYS | | 4 |
| 591-1 | | | M | PPC (black) | 128 <0-255> | SYS | | 4 |
| 591-2 | | | H | PPC (black) | 128 <0-255> | SYS | | 4 |
| 592-0 | Image | Adjustment of gamma balance (Photo) | L | PPC (black) | 128 <0-255> | SYS | | 4 |
| 592-1 | | | M | PPC (black) | 128 <0-255> | SYS | | 4 |
| 592-2 | | | H | PPC (black) | 128 <0-255> | SYS | | 4 |
| 596-0 | Image | Adjustment of gamma balance (PS/Smooth) | L | PRT (black) | 128 <0-255> | SYS | 4 | |
| 596-1 | | | M | PRT (black) | 128 <0-255> | SYS | 4 | |
| 596-2 | | | H | PRT (black) | 128 <0-255> | SYS | 4 | |
| 597-0 | Image | Adjustment of gamma balance (PS/Detail) | L | PRT (black) | 128 <0-255> | SYS | When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H : High density area | 4 |
| 597-1 | | | M | PRT (black) | 128 <0-255> | SYS | | 4 |
| 597-2 | | | H | PRT (black) | 128 <0-255> | SYS | | 4 |
| 598-0 | Image | Adjustment of gamma balance (PCL/Smooth) | L | PRT (black) | 128 <0-255> | SYS | | 4 |
| 598-1 | | | M | PRT (black) | 128 <0-255> | SYS | | 4 |
| 598-2 | | | H | PRT (black) | 128 <0-255> | SYS | | 4 |
| 599-0 | Image | Adjustment of gamma balance (PCL/Detail) | L | PRT (black) | 128 <0-255> | SYS | | 4 |
| 599-1 | | | M | PRT (black) | 128 <0-255> | SYS | | 4 |
| 599-2 | | | H | PRT (black) | 128 <0-255> | SYS | | 4 |
| 600 | Image | Background adjustment | Text/Photo | PPC (black) | 5 <1-9> | SYS | When the value decreases, the background becomes darker. When the value increases, the background becomes lighter. | 1 |
| 601 | | | Text | PPC (black) | 5 <1-9> | SYS | | 1 |
| 602 | | | Photo | PPC (black) | 5 <1-9> | SYS | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---------------------------------------|----------------|-------------|----------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 604 | Image | Sharpness adjustment | Text/Photo | PPC (black) | 0 <0-31> | SYS | When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes. * The default value 0 is equivalent to 16 (center value). | 1 |
| 605 | | | Text | PPC (black) | 0 <0-31> | SYS | | 1 |
| 606 | | | Photo | PPC (black) | 0 <0-31> | SYS | | 1 |
| 648 | Image | Adjustment of smudged/faint text | Text/Photo | PPC (black) | 30 <0-255> | SYS | Adjustment of the smudged/faint text. With increasing the value, the faint text is suppressed, and with decreasing it, the smudged text is suppressed. | 1 |
| 654 | Image | Adjustment of smudged/faint text | PS | PRT (black) | 5 <0-9> | SYS | When the value decreases, the width of text becomes wider. | 1 |
| 655 | | | PCL | PRT (black) | 5 <0-9> | SYS | | 1 |
| 663 | Image | Dot size adjustment in black printing | | PRT (black) | 255 <0-255> | SYS | Adjusts the dot size of primary scanning direction in black printing. The smaller the value is, the dot becomes smaller. | 1 |
| 664 | Image | Upper limit in toner saving mode | PS | PRT (black) | 176 <0-255> | SYS | When the value decreases, the printing density becomes lighter. | 1 |
| 665 | | | PCL | PRT (black) | 176 <0-255> | SYS | | 1 |
| 667-0 | Image | Setting beam level conversion | Beam level 0/4 | PPC (black) | 0 <0-255> | M | Sets the beam level for 4 divided smoothing. The primary scanning direction is divided into 4 and the dot width is set at the 5 levels (incl. level "0"). The smaller the value is, the smaller the primary scanning direction of the dot becomes. | 4 |
| 667-1 | | | Beam level 1/4 | PPC (black) | 63 <0-255> | M | | 4 |
| 667-2 | | | Beam level 2/4 | PPC (black) | 127 <0-255> | M | | 4 |
| 667-3 | | | Beam level 3/4 | PPC (black) | 191 <0-255> | M | | 4 |
| 667-4 | | | Beam level 4/4 | PPC (black) | 255 <0-255> | M | | 4 |

| Adjustment mode (05) | | | | | | | | | |
|----------------------|----------------|--|------------------|----------------------------|------------------------------------|----------|---|-----|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | | |
| 693 | Image | Range correction on original set on the RADF | Text/Photo | PPC (black) | 22 <11-14, 21-24, 31-34, 41-44> | SYS | Sets whether the values of the background peak and text peak are fixed or not. One's place is an adjustment for "automatic density" and ten's place is for "manual density". Once they are fixed, the range correction is performed with standard values. The values of the background peak and text peak affect the reproduction of the background density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/Text peak | 1 | |
| 694 | | | Photo | PPC (black) | 12 <11-14, 21-24, 31-34, 41-44> | | | SYS | 1 |
| 695 | | | Text | PPC (black) | 22 <11-14, 21-24, 31-34, 41-44> | | | SYS | 1 |
| 700 | Image | Adjustment of binarized threshold (Text) | Center value | FAX (black) | 125 <0-255> | SYS | When the value increases, the image of center value density becomes darker. | 1 | |
| 701 | | | Light step value | FAX (black) | 20 <0-255> | | | SYS | 1 |
| 702 | | | Dark step value | FAX (black) | 20 <0-255> | | | SYS | 1 |
| 710 | Image | Density adjustment "manual density" fine adjustment/Center value | Photo | FAX (black) | 128 <0-255> | SYS | When the value increases, the image of the center step density becomes darker. | 1 | |
| 714 | | | Text/Photo | FAX (black) | 128 <0-255> | | | SYS | 1 |
| 715 | Image | Density adjustment "manual density" fine adjustment/Light step value | Photo | FAX (black) | 20 <0-255> | SYS | Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "light" steps becomes lighter. | 1 | |
| 719 | | | Text/Photo | FAX (black) | 20 <0-255> | | | SYS | 1 |
| 720 | Image | Density adjustment "manual density" fine adjustment/Dark step value | Photo | FAX (black) | 20 <0-255> | SYS | Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "dark" steps becomes darker. | 1 | |
| 724 | | | Text/Photo | FAX (black) | 20 <0-255> | | | SYS | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|------------|----------------------------|---------------------------------|----------|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 725 | Image | Density adjustment "automatic density" fine adjustment | Photo | FAX (black) | 128 <0-255> | SYS | When the value increases, the image becomes darker. | 1 |
| 729 | | | Text/Photo | FAX (black) | 128 <0-255> | SYS | | 1 |
| 825 | Image | Range correction on original manually set on the original glass | Text/Photo | SCN (black) | 12 <11-14, 21-24, 31-34, 41-44> | SYS | Sets whether the values of the background peak and text peak are fixed or not. One's place is an adjustment for "automatic density" and ten's place is for "manual density". Once they are fixed, the range correction is performed with standard values. The values of the background peak and text peak affect the reproduction of the background density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak | 1 |
| 826 | | | Text | SCN (black) | 12 <11-14, 21-24, 31-34, 41-44> | SYS | | 1 |
| 827 | | | Photo | SCN (black) | 12 <11-14, 21-24, 31-34, 41-44> | SYS | | 1 |
| 828 | | | Gray scale | SCN (black) | 12 <11-14, 21-24, 31-34, 41-44> | SYS | | 1 |
| 830 | Image | Range correction on original set on the RADF | Text/Photo | SCN (black) | 12 <11-14, 21-24, 31-34, 41-44> | SYS | Sets whether the values of the background peak and text peak are fixed or not. One's place is an adjustment for "automatic density" and ten's place is for "manual density". Once they are fixed, the range correction is performed with standard values. The values of the background peak and text peak affect the reproduction of the background density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak | 1 |
| 831 | | | Text | SCN (black) | 12 <11-14, 21-24, 31-34, 41-44> | SYS | | 1 |
| 832 | | | Photo | SCN (black) | 12 <11-14, 21-24, 31-34, 41-44> | SYS | | 1 |
| 833 | | | Gray scale | SCN (black) | 12 <11-14, 21-24, 31-34, 41-44> | SYS | | 1 |
| 835 | Image | Range correction Background peak adjustment | Text/Photo | SCN (black) | 56 <0-255> | SYS | When the value increases, the background of the image (low density area) becomes harder to be printed out. | 1 |
| 836 | | | Text | SCN (black) | 48 <0-255> | SYS | | 1 |
| 837 | | | Photo | SCN (black) | 16 <0-255> | SYS | | 1 |
| 838 | | | Gray scale | SCN (black) | 32 <0-255> | SYS | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|------------|----------------|----------------------------------|-----|---|----------------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Pro- cedure |
| 840 | Image | Sharpness adjustment | Text/Photo | SCN (black) | 0 <0-31> | SYS | When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes. * The default value 0 is equivalent to 16 (center value). | 1 |
| 841 | | | Text | SCN (black) | 0 <0-31> | SYS | | 1 |
| 842 | | | Photo | SCN (black) | 0 <0-31> | SYS | | 1 |
| 843 | | | Gray scale | SCN (black) | 0 <0-31> | SYS | | 1 |
| 845 | Image | Density adjustment "manual den- sity" fine adjustment/ Center value | Text/Photo | SCN (black) | 128 <0-255> | SYS | When the value increases, the image becomes darker. | 1 |
| 846 | | | Text | SCN (black) | 128 <0-255> | SYS | | 1 |
| 847 | | | Photo | SCN (black) | 128 <0-255> | SYS | | 1 |
| 848 | Image | Fine adjustment of back- ground / Center value | | SCN (black) | 128 <0-255> | SYS | When the value increases, the back- ground becomes darker. | 1 |
| 850 | Image | Density adjustment "manual den- sity" fine adjustment/ Light step value | Text/Photo | SCN (black) | 20 <0-255> | SYS | When the value increases, the image of the "light" steps becomes lighter. | 1 |
| 851 | | | Text | SCN (black) | 20 <0-255> | SYS | | 1 |
| 852 | | | Photo | SCN (black) | 20 <0-255> | SYS | | 1 |
| 853 | Image | Fine adjustment of back- ground / Light step value (Image smoothing) | | SCN (black) | 50 <0-255> | SYS | Sets the changing amount by 1 step at background adjust- ment. When the value increases, the back- ground of the "light" steps becomes lighter. | 1 |
| 855 | Image | Density adjustment "manual den- sity" fine adjustment/ Dark step value | Text/Photo | SCN (black) | 20 <0-255> | SYS | When the value increases, the image of the "dark" steps becomes darker. | 1 |
| 856 | | | Text | SCN (black) | 20 <0-255> | SYS | | 1 |
| 857 | | | Photo | SCN (black) | 20 <0-255> | SYS | | 1 |
| 858 | Image | Fine adjustment of back- ground / Dark step value (Image smoothing) | | SCN (black) | 50 <0-255> | SYS | Sets the changing amount by 1 step at background adjust- ment. When the value increases, the back- ground of the "dark" steps becomes darker. | 1 |
| 860 | Image | Density adjustment "automatic density" fine adjustment | Text/Photo | SCN (black) | 128 <0-255> | SYS | When the value increases, the image becomes darker. | 1 |
| 861 | | | Text | SCN (black) | 128 <0-255> | SYS | | 1 |
| 862 | | | Photo | SCN (black) | 128 <0-255> | SYS | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|----------|-------------------------------|------------------|----------|---|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 880-0 | Image | Adjustment of gamma balance (Text/Photo) | L | SCN (black) | 128 <0-255> | SYS | When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area | 4 |
| 880-1 | | | M | SCN (black) | 128 <0-255> | SYS | | 4 |
| 880-2 | | | H | SCN (black) | 128 <0-255> | SYS | | 4 |
| 881-0 | Image | Adjustment of gamma balance (Text) | L | SCN (black) | 128 <0-255> | SYS | | 4 |
| 881-1 | | | M | SCN (black) | 128 <0-255> | SYS | | 4 |
| 881-2 | | | H | SCN (black) | 128 <0-255> | SYS | | 4 |
| 882-0 | Image | Adjustment of gamma balance (Photo) | L | SCN (black) | 128 <0-255> | SYS | | 4 |
| 882-1 | | | M | SCN (black) | 128 <0-255> | SYS | | 4 |
| 882-2 | | | H | SCN (black) | 128 <0-255> | SYS | | 4 |
| 883-0 | Image | Adjustment of gamma balance (Gray scale) | L | SCN (black) | 128 <0-255> | SYS | 4 | |
| 883-1 | | | M | SCN (black) | 128 <0-255> | SYS | 4 | |
| 883-2 | | | H | SCN (black) | 128 <0-255> | SYS | 4 | |
| 884 | Image | Reproduction ratio fine adjustment of primary scanning direction | | SCN (black) | 128 <0-255> | SYS | When the value increases by "1", the reproduction ratio of primary scanning direction increases by approx. 0.1%. Effective with the resolution other than 600 dpi. | 1 |
| 953-0 | Image | Color deviation correction 3 (A4/LT) | K | ALL | 128 <118-138> | M | When the value increases by "1", the image shifts toward the trailing edge of the paper by 0.0423 mm. | 4 |
| 953-1 | | | C | ALL | 128 <118-138> | M | | 4 |
| 953-2 | | | M | ALL | 128 <118-138> | M | | 4 |
| 953-3 | | | Y | ALL | 128 <118-138> | M | | 4 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|------------------|----------------------------|---------------|----------|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 954-0 | Image | Color deviation correction 4 (A4/LT) | K | ALL | 128 <118-138> | M | When the value increases by "1", the image shifts toward the trailing edge of the paper by 0.0423 mm. | 4 |
| 954-1 | | | C | ALL | 128 <118-138> | M | | 4 |
| 954-2 | | | M | ALL | 128 <118-138> | M | | 4 |
| 954-3 | | | Y | ALL | 128 <118-138> | M | | 4 |
| 955-0 | Image | Color deviation correction 5 (A4/LT) | K | ALL | 128 <118-138> | M | When the value increases by "1", the image shifts toward the trailing edge of the paper by 0.0423 mm. | 4 |
| 955-1 | | | C | ALL | 128 <118-138> | M | | 4 |
| 955-2 | | | M | ALL | 128 <118-138> | M | | 4 |
| 955-3 | | | Y | ALL | 128 <118-138> | M | | 4 |
| 956-0 | Image | Color deviation correction 6 (A4/LT) | K | ALL | 128 <118-138> | M | When the value increases by "1", the image shifts toward the trailing edge of the paper by 0.0423 mm. | 4 |
| 956-1 | | | C | ALL | 128 <118-138> | M | | 4 |
| 956-2 | | | M | ALL | 128 <118-138> | M | | 4 |
| 956-3 | | | Y | ALL | 128 <118-138> | M | | 4 |
| 976 | Maintenance | Equipment number (serial number) display | | ALL | - | SYS | When this adjustment is performed with this code, the setting code (08-995) is also performed automatically. (10 digits) | 1 |
| 1000 | Image | Automatic gamma adjustment | PS/600x600 dpi | PRT (color) | - | SYS | Adjusts the gradation reproduction for each color, Y, M, C and K. | 7 |
| 1001 | | | PS/1200x600 dpi | PRT (color) | - | SYS | | 7 |
| 1002 | | | PCL/600x600 dpi | PRT (color) | - | SYS | | 7 |
| 1003 | | | PCL/1200x600 dpi | PRT (color) | - | SYS | | 7 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|----------|----------------------------|-------------|----------|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 1010-0 | Image | Color balance adjustment for "Y" (PS/ 600x600dpi/ Smooth) | L | PRT (color) | 128 <0-255> | SYS | The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area | 4 |
| 1010-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1010-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1011-0 | Image | Color balance adjustment for "M" (PS/ 600x600dpi/ Smooth) | L | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1011-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1011-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1012-0 | Image | Color balance adjustment for "C" (PS/ 600x600dpi/ Smooth) | L | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1012-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1012-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1013-0 | Image | Color balance adjustment for "K" (PS/ 600x600dpi/ Smooth) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1013-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1013-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1014-0 | Image | Color balance adjustment for "Y" (PS/ 600x600dpi/ Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1014-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1014-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1015-0 | Image | Color balance adjustment for "M" (PS/ 600x600dpi/ Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1015-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1015-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1016-0 | Image | Color balance adjustment for "C" (PS/ 600x600dpi/ Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1016-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1016-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1017-0 | Image | Color balance adjustment for "K" (PS/ 600x600dpi/ Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1017-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1017-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1018-0 | Image | Color balance adjustment for "Y" (PS/ 1200x600dpi/ Smooth) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1018-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1018-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|----------|----------------------------------|----------------|----------|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Pro- cedure | |
| 1019-0 | Image | Color balance adjustment for "M" (PS/1200x600dpi/Smooth) | L | PRT (color) | 128 <0-255> | SYS | The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area | 4 |
| 1019-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1019-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1020-0 | Image | Color balance adjustment for "C" (PS/1200x600dpi/Smooth) | L | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1020-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1020-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1021-0 | Image | Color balance adjustment for "K" (PS/1200x600dpi/Smooth) | L | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1021-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1021-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1022-0 | Image | Color balance adjustment for "Y" (PS/1200x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1022-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1022-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1023-0 | Image | Color balance adjustment for "M" (PS/1200x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1023-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1023-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1024-0 | Image | Color balance adjustment for "C" (PS/1200x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1024-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1024-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1025-0 | Image | Color balance adjustment for "K" (PS/1200x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1025-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1025-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1026-0 | Image | Color balance adjustment for "Y" (PCL/600x600dpi/Smooth) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1026-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1026-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1027-0 | Image | Color balance adjustment for "M" (PCL/600x600dpi/Smooth) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1027-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1027-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|----------|----------------------------------|----------------|----------|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Pro- cedure | |
| 1028-0 | Image | Color balance adjustment for "C" (PCL/600x600dpi/Smooth) | L | PRT (color) | 128 <0-255> | SYS | The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area | 4 |
| 1028-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1028-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1029-0 | Image | Color balance adjustment for "K" (PCL/600x600dpi/Smooth) | L | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1029-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1029-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1030-0 | Image | Color balance adjustment for "Y" (PCL/600x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1030-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1030-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1031-0 | Image | Color balance adjustment for "M" (PCL/600x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1031-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1031-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1032-0 | Image | Color balance adjustment for "C" (PCL/600x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1032-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1032-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1033-0 | Image | Color balance adjustment for "K" (PCL/600x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1033-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1033-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1034-0 | Image | Color balance adjustment for "Y" (PCL/1200x600dpi/Smooth) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1034-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1034-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1035-0 | Image | Color balance adjustment for "M" (PCL/1200x600dpi/Smooth) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1035-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1035-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1036-0 | Image | Color balance adjustment for "C" (PCL/1200x600dpi/Smooth) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1036-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1036-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|----------|----------------------------------|----------------|----------|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 1037-0 | Image | Color balance adjustment for "K" (PCL/1200x600dpi/Smooth) | L | PRT (color) | 128 <0-255> | SYS | The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area | 4 |
| 1037-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1037-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1038-0 | Image | Color balance adjustment for "Y" (PCL/1200x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1038-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1038-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1039-0 | Image | Color balance adjustment for "M" (PCL/1200x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1039-1 | | | M | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1039-2 | | | H | PRT (color) | 128 <0-255> | SYS | | 4 |
| 1040-0 | Image | Color balance adjustment for "C" (PCL/1200x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1040-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1040-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1041-0 | Image | Color balance adjustment for "K" (PCL/1200x600dpi/Detail) | L | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1041-1 | | | M | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1041-2 | | | H | PRT (color) | 128 <0-255> | SYS | 4 | |
| 1046-0 | Image | Adjustment of maximum toner amount (Plain paper) | PS | PRT (color) | 255 <0-255> | SYS | When the value decreases, the image becomes lighter. Note: When the value increases, the image offsetting may occur. | 4 |
| 1046-1 | | | PCL | PRT (color) | 255 <0-255> | SYS | | 4 |
| 1047-0 | Image | Adjustment of maximum toner amount (Thick paper 1) | PS | PRT (color) | 255 <0-255> | SYS | | 4 |
| 1047-1 | | | PCL | PRT (color) | 255 <0-255> | SYS | | 4 |
| 1048-0 | Image | Adjustment of maximum toner amount (Thick paper 2) | PS | PRT (color) | 255 <0-255> | SYS | | 4 |
| 1048-1 | | | PCL | PRT (color) | 255 <0-255> | SYS | | 4 |
| 1049-0 | Image | Adjustment of maximum toner amount (Thick paper 3) | PS | PRT (color) | 255 <0-255> | SYS | | 4 |
| 1049-1 | | | PCL | PRT (color) | 255 <0-255> | SYS | | 4 |
| 1050-0 | Image | Adjustment of maximum toner amount (OHP film) | PS | PRT (color) | 200 <0-255> | SYS | | 4 |
| 1050-1 | | | PCL | PRT (color) | 200 <0-255> | SYS | | 4 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|---------------|-------------|----------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1055 | Image | Upper limit in toner saving mode | | PRT (color) | 176 <0-255> | SYS | When the value decreases, the printing density becomes lighter. | 1 |
| 1056 | | | | PRT (color) | 176 <0-255> | SYS | | 1 |
| 1057 | | | | PRT (color) | 176 <0-255> | SYS | | 1 |
| 1058 | | | | PRT (color) | 176 <0-255> | SYS | | 1 |
| 1060 | Image | Reproduction ratio fine adjustment of primary scanning direction | | SCN (color) | 128 <0-255> | SYS | When the value increases by "1", the reproduction ratio of primary scanning direction increases by approx. 0.1%. Effective with the resolution other than 600 dpi. | 1 |
| 1065 | Image | Judgment threshold for ACS | | SCN (color) | 70 <0-255> | SYS | When the value increases, originals tend to be judged as monochrome, and when the value decreases, they tend to be judged as color in autocolour mode. | 1 |
| 1066 | Image | Judgment threshold for ACS on original set on the RADF | | SCN (color) | 70 <0-255> | SYS | | 1 |
| 1070 | Image | Fine adjustment of background | Text | SCN (color) | 0 <0-50> | SYS | Adjusts the level of background. When the value increases, the background becomes more brightened. | 1 |
| 1071 | | | Printed image | SCN (color) | 0 <0-50> | SYS | | 1 |
| 1072 | | | Photo | SCN (color) | 0 <0-50> | SYS | | 1 |
| 1075 | Image | Fine adjustment of black density | Text | SCN (color) | 0 <0-4> | SYS | Adjusts the black density of the scanned image. When the value increases, the black density becomes darker. | 1 |
| 1076 | | | Printed image | SCN (color) | 0 <0-4> | SYS | | 1 |
| 1077 | | | Photo | SCN (color) | 0 <0-4> | SYS | | 1 |
| 1080 | Image | RGB conversion method selection | Text | SCN (color) | 0 <0-3> | SYS | Sets the color space format of the output image. 0: sRGB 1: AppleRGB 2: ROMMRGB 3: AdobeRGB | 1 |
| 1081 | | | Printed image | SCN (color) | 0 <0-3> | SYS | | 1 |
| 1082 | | | Photo | SCN (color) | 0 <0-3> | SYS | | 1 |
| 1086 | Image | Sharpness adjustment | Text | SCN (color) | 0 <0-31> | SYS | When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes. * The default value 0 is equivalent to 16 (center value). | 1 |
| 1087 | | | Printed image | SCN (color) | 0 <0-31> | SYS | | 1 |
| 1088 | | | Photo | SCN (color) | 0 <0-31> | SYS | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|------------------|----------------------------------|----------------|----------|---|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 1550 | Image | Density adjustment "manual density" fine adjustment/ Center value | Text/Photo | PPC (color) | 128 <0-255> | SYS | When the value increases, the image becomes darker. | 1 |
| 1551 | | | Text | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1552 | | | Printed image | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1553 | | | Photo | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1554 | | | Map | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1560 | Image | Density adjustment "manual density" fine adjustment/ Dark step value | Text/Photo | PPC (color) | 20 <0-255> | SYS | Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "dark" steps becomes darker. | 1 |
| 1561 | | | Text | PPC (color) | 20 <0-255> | SYS | | 1 |
| 1562 | | | Printed image | PPC (color) | 20 <0-255> | SYS | | 1 |
| 1563 | | | Photo | PPC (color) | 20 <0-255> | SYS | | 1 |
| 1564 | | | Map | PPC (color) | 20 <0-255> | SYS | | 1 |
| 1570 | Image | Density adjustment "manual density" fine adjustment/ Light step value | Text/Photo | PPC (color) | 20 <0-255> | SYS | Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "light" steps becomes lighter. | 1 |
| 1571 | | | Text | PPC (color) | 20 <0-255> | SYS | | 1 |
| 1572 | | | Printed image | PPC (color) | 20 <0-255> | SYS | | 1 |
| 1573 | | | Photo | PPC (color) | 20 <0-255> | SYS | | 1 |
| 1574 | | | Map | PPC (color) | 20 <0-255> | SYS | | 1 |
| 1580 | Image | Density adjustment "automatic density" fine adjustment | Text/Photo | PPC (color) | 128 <0-255> | SYS | When the value increases, the image becomes darker. | 1 |
| 1581 | | | Text | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1582 | | | Printed image | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1583 | | | Photo | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1584 | | | Map | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1612 | Image | Adjustment of maximum toner amount | Plain paper | PPC (color) | 255 <0-255> | SYS | When the value decreases, the image becomes lighter. Note: When the value increases, image offsetting may occur. | 1 |
| 1613 | | | Thick paper 1 | PPC (color) | 249 <0-255> | SYS | | 1 |
| 1614 | | | Thick paper 2 | PPC (color) | 237 <0-255> | SYS | | 1 |
| 1615 | | | Thick paper 3 | PPC (color) | 237 <0-255> | SYS | | 1 |
| 1616 | | | OHP film | PPC (color) | 249 <0-255> | SYS | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|---------------|-------------|----------------------------|-----|---|--|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1630 | Image | Maximum text density adjustment | Y | PPC (color) | 5 <0-10> | SYS | When the value increases by "1", the maximum text density of each color becomes darker. | 1 |
| 1631 | | | M | PPC (color) | 5 <0-10> | SYS | | 1 |
| 1632 | | | C | PPC (color) | 5 <0-10> | SYS | | 1 |
| 1633 | | | K | PPC (color) | 5 <0-10> | SYS | | 1 |
| 1642 | Image | Automatic gamma adjustment | Color/Black | PPC | - | SYS | Automatic adjustment of gradation reproduction in the Full Color Mode (each color of Y, M, C and K) and Black Mode. | 7 |
| 1643 | | | Color | PPC | - | SYS | | Automatic adjustment of gradation reproduction in the Full Color Mode (each color of Y, M, C and K). |
| 1675 | Image | Judgment threshold for ACS | | PPC (color) | 70 <0-255> | SYS | When the value increases, originals tend to be judged as black, and when the value decreases, they tend to be judged as color in auto-color mode. | 1 |
| 1676 | Image | Judgment threshold for ACS on original set on the RADF | | PPC (color) | 70 <0-255> | SYS | | 1 |
| 1688 | Image | Automatic off-setting adjustment for background processing (background density) | Text/Photo | PPC (color) | 128 <0-255> | SYS | When the value increases, the background becomes darker. | 1 |
| 1689 | | | Text | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1690 | | | Printed image | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1691 | | | Photo | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1692 | | | Map | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1693 | Image | Automatic off-setting adjustment for background processing (text density) | Text/Photo | PPC (color) | 128 <0-255> | SYS | When the value increases, the text becomes darker. | 1 |
| 1694 | | | Text | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1695 | | | Printed image | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1696 | | | Photo | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1697 | | | Map | PPC (color) | 128 <0-255> | SYS | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|---------------|----------------------------|-------------|---|---|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 1698 | Image | Manual offsetting adjustment for background processing (background density) | Text/Photo | PPC (color) | 128 <0-255> | SYS | When the value increases, the background becomes darker. | 1 |
| 1699 | | | Text | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1700 | | | Printed image | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1701 | | | Photo | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1702 | | | Map | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1708 | Image | Manual offsetting adjustment for background processing (text density) | Text/Photo | PPC (color) | 128 <0-255> | SYS | When the value increases, the text becomes darker. | 1 |
| 1709 | | | Text | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1710 | | | Printed image | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1711 | | | Photo | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1712 | | | Map | PPC (color) | 128 <0-255> | SYS | | 1 |
| 1725 | Image | Text/Photo reproduction level adjustment | PPC (color) | 0 <0-5> | SYS | 0: Default 1: Photo oriented 2 (The printed image reproduction level higher than that of the Photo oriented 1) 2: Photo oriented 1 (The printed image reproduction level higher than that of the Default) 3: Equivalent to the Default 4: Text oriented 1 (The text reproduction level higher than that of the Default) 5: Text oriented 2 (The text reproduction level higher than that of the Text oriented 1) | 1 | |
| 1737 | Image | Sharpness adjustment / Full Color Mode | Text/Photo | PPC (color) | 0 <0-31> | SYS | When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes. * The default value 0 is equivalent to 16 (center value). | 1 |
| 1738 | | | Text | PPC (color) | 0 <0-31> | SYS | | 1 |
| 1739 | | | Printed image | PPC (color) | 0 <0-31> | SYS | | 1 |
| 1740 | | | Photo | PPC (color) | 0 <0-31> | SYS | | 1 |
| 1741 | | | Map | PPC (color) | 0 <0-31> | SYS | | 1 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|-------|-------------|---------------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1757 | Image | Sharpness adjustment / Auto Color Mode (Text/Photo) | | PPC (color) | EUR: 0 UC: 0 JAPN: 22 <0-31> | SYS | When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes. * The default value 0 is equivalent to 16(center value). | 1 |
| 1761 | Image | Black reproduction switching | | PPC (color) | 0 <0-1> | SYS | 0: Default 1: Black reproduction oriented | 1 |
| 1769 | Image | Setting for highlighter | Vivid | PPC (color) | 0 <0-2> | SYS | Sets the reproduction mode for highlighter for four types of one touch adjustment. 0: Default 1: Highlighter 1 2: Highlighter 2 | 1 |
| 1770 | | | Clear | PPC (color) | 0 <0-2> | SYS | | 1 |
| 1771 | | | Warm | PPC (color) | 0 <0-2> | SYS | | 1 |
| 1772 | | | Cool | PPC (color) | 0 <0-2> | SYS | | 1 |
| 1779-0 | Image | Color balance adjustment for "Y" (Text/Photo) | L | PPC (color) | 128 <0-255> | SYS | The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area | 4 |
| 1779-1 | | | M | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1779-2 | | | H | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1780-0 | Image | Color balance adjustment for "Y" (Text) | L | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1780-1 | | | M | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1780-2 | | | H | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1781-0 | Image | Color balance adjustment for "Y" (Printed image) | L | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1781-1 | | | M | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1781-2 | | | H | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1782-0 | Image | Color balance adjustment for "Y" (Photo) | L | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1782-1 | | | M | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1782-2 | | | H | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1783-0 | Image | Color balance adjustment for "Y" (Map) | L | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1783-1 | | | M | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1783-2 | | | H | PPC (color) | 128 <0-255> | SYS | | 4 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|----------|----------------------------------|----------------|----------|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Pro- cedur e | |
| 1784-0 | Image | Color bal- ance adjust- ment for "M" (Text/Photo) | L | PPC (color) | 128 <0-255> | SYS | The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area | 4 |
| 1784-1 | | | M | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1784-2 | | | H | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1785-0 | Image | Color bal- ance adjust- ment for "M" (Text) | L | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1785-1 | | | M | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1785-2 | | | H | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1786-0 | Image | Color bal- ance adjust- ment for "M" (Printed image) | L | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1786-1 | | | M | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1786-2 | | | H | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1787-0 | Image | Color bal- ance adjust- ment for "M" (Photo) | L | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1787-1 | | | M | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1787-2 | | | H | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1788-0 | Image | Color bal- ance adjust- ment for "M" (Map) | L | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1788-1 | | | M | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1788-2 | | | H | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1789-0 | Image | Color bal- ance adjust- ment for "C" (Text/Photo) | L | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1789-1 | | | M | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1789-2 | | | H | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1790-0 | Image | Color bal- ance adjust- ment for "C" (Text) | L | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1790-1 | | | M | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1790-2 | | | H | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1791-0 | Image | Color bal- ance adjust- ment for "C" (Printed image) | L | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1791-1 | | | M | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1791-2 | | | H | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1792-0 | Image | Color bal- ance adjust- ment for "C" (Photo) | L | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1792-1 | | | M | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1792-2 | | | H | PPC (color) | 128 <0-255> | SYS | 4 | |

| Adjustment mode (05) | | | | | | | | |
|----------------------|------------------|--|----------|----------------------------------|----------------|----------|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Pro- cedur e | |
| 1793-0 | Image | Color bal- ance adjust- ment for "C" (Map) | L | PPC (color) | 128 <0-255> | SYS | The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area | 4 |
| 1793-1 | | | M | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1793-2 | | | H | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1794-0 | Image | Color bal- ance adjust- ment for "K" (Text/Photo) | L | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1794-1 | | | M | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1794-2 | | | H | PPC (color) | 128 <0-255> | SYS | | 4 |
| 1795-0 | Image | Color bal- ance adjust- ment for "K" (Text) | L | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1795-1 | | | M | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1795-2 | | | H | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1796-0 | Image | Color bal- ance adjust- ment for "K" (Printed image) | L | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1796-1 | | | M | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1796-2 | | | H | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1797-0 | Image | Color bal- ance adjust- ment for "K" (Photo) | L | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1797-1 | | | M | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1797-2 | | | H | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1798-0 | Image | Color bal- ance adjust- ment for "K" (Map) | L | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1798-1 | | | M | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1798-2 | | | H | PPC (color) | 128 <0-255> | SYS | 4 | |
| 1800-0 | Image control | Upper limit value of con- trast voltage | Y | ALL | 650 <0-999> | M | Sets the upper limit value of the contrast voltage at the image quality control. (Unit: V) | 4 |
| 1800-1 | | | M | ALL | 650 <0-999> | M | | 4 |
| 1800-2 | | | C | ALL | 650 <0-999> | M | | 4 |
| 1800-3 | | | K | ALL | 600 <0-999> | M | | 4 |
| 1801-0 | Image control | Lower limit value of con- trast voltage | Y | ALL | 120 <0-999> | M | Sets the lower limit value of the contrast voltage at the image quality control. (Unit: V) | 4 |
| 1801-1 | | | M | ALL | 120 <0-999> | M | | 4 |
| 1801-2 | | | C | ALL | 120 <0-999> | M | | 4 |
| 1801-3 | | | K | ALL | 120 <0-999> | M | | 4 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|----------|----------------------------------|------------------|----------|---|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 1802-0 | Image control | Upper limit value of laser power | Y | ALL | 800 <0-999> | M | Sets the upper limit value of the laser power at the image quality control. (Unit: μ W) | 4 |
| 1802-1 | | | M | ALL | 800 <0-999> | M | | 4 |
| 1802-2 | | | C | ALL | 800 <0-999> | M | | 4 |
| 1802-3 | | | K | ALL | 800 <0-999> | M | | 4 |
| 1803-0 | Image control | Lower limit value of laser power | Y | ALL | 350 <0-999> | M | Sets the lower limit value of the laser power at the image quality control. (Unit: μ W) | 4 |
| 1803-1 | | | M | ALL | 350 <0-999> | M | | 4 |
| 1803-2 | | | C | ALL | 350 <0-999> | M | | 4 |
| 1803-3 | | | K | ALL | 350 <0-999> | M | | 4 |
| 1804-0 | Image control | Background voltage actual value display | Y | ALL | 125 <0-999> | M | Displays the background voltage when printing is operated. (Unit: V) | 10 |
| 1804-1 | | | M | ALL | 125 <0-999> | M | | 10 |
| 1804-2 | | | C | ALL | 125 <0-999> | M | | 10 |
| 1804-3 | | | K | ALL | 125 <0-999> | M | | 10 |
| 1805-0 | Image control | Drum surface potential characteristic/slope factor display | Y | ALL | 979 <0-999> | M | Displays the slope factor of the approximate expression of the drum surface potential to the main charger grid voltage at the open-loop control. | 10 |
| 1805-1 | | | M | ALL | 979 <0-999> | M | | 10 |
| 1805-2 | | | C | ALL | 979 <0-999> | M | | 10 |
| 1805-3 | | | K | ALL | 990 <0-999> | M | | 10 |
| 1806-0 | Image control | Drum surface potential characteristic/offset factor display | Y | ALL | -6 <-999-999> | M | Displays the offset factor of the approximate expression of the drum surface potential to the main charger grid voltage at the open-loop control. | 10 |
| 1806-1 | | | M | ALL | -6 <-999-999> | M | | 10 |
| 1806-2 | | | C | ALL | -6 <-999-999> | M | | 10 |
| 1806-3 | | | K | ALL | -4 <-999-999> | M | | 10 |
| 1807-0 | Image control | Drum exposure voltage characteristic/slope factor display (main charger grid low voltage area) | Y | ALL | 58 <0-999> | M | Displays the slope factor of the approximate expression of the drum exposure voltage to the main charger grid voltage at the open-loop control. | 10 |
| 1807-1 | | | M | ALL | 58 <0-999> | M | | 10 |
| 1807-2 | | | C | ALL | 58 <0-999> | M | | 10 |
| 1807-3 | | | K | ALL | 60 <0-999> | M | | 10 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|----------|----------------------------|---------------|----------|--|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 1808-0 | Image control | Drum exposure voltage characteristic/offset factor display (main charger grid low voltage area) | Y | ALL | 35 <-999-999> | M | Displays the offset factor of the approximate expression of the drum exposure voltage to the main charger grid voltage at the open-loop control. | 10 |
| 1808-1 | | | M | ALL | 35 <-999-999> | M | | 10 |
| 1808-2 | | | C | ALL | 35 <-999-999> | M | | 10 |
| 1808-3 | | | K | ALL | 42 <-999-999> | M | | 10 |
| 1809-0 | Image control | Drum exposure voltage characteristic/slope factor display (main charger grid high voltage area) | Y | ALL | 49 <0-999> | M | Displays the slope factor of the approximate expression of the drum exposure voltage to the main charger grid voltage at the open-loop control. | 10 |
| 1809-1 | | | M | ALL | 49 <0-999> | M | | 10 |
| 1809-2 | | | C | ALL | 49 <0-999> | M | | 10 |
| 1809-3 | | | K | ALL | 53 <0-999> | M | | 10 |
| 1810-0 | Image control | Drum exposure voltage characteristic/offset factor display (main charger grid high voltage area) | Y | ALL | 41 <-999-999> | M | Displays the offset factor of the approximate expression of the drum exposure voltage to the main charger grid voltage at the open-loop control. | 10 |
| 1810-1 | | | M | ALL | 41 <-999-999> | M | | 10 |
| 1810-2 | | | C | ALL | 41 <-999-999> | M | | 10 |
| 1810-3 | | | K | ALL | 47 <-999-999> | M | | 10 |
| 1811-0 | Image control | Contrast voltage/upper limit actual value display | Y | ALL | 500 <0-999> | M | Displays the upper limit value of the contrast voltage when printing is operated. (Unit: V) | 10 |
| 1811-1 | | | M | ALL | 500 <0-999> | M | | 10 |
| 1811-2 | | | C | ALL | 500 <0-999> | M | | 10 |
| 1811-3 | | | K | ALL | 600 <0-999> | M | | 10 |
| 1812-0 | Image control | Contrast voltage/lower limit actual value display | Y | ALL | 120 <0-999> | M | Displays the lower limit value of the contrast voltage when printing is operated. (Unit: V) | 10 |
| 1812-1 | | | M | ALL | 120 <0-999> | M | | 10 |
| 1812-2 | | | C | ALL | 120 <0-999> | M | | 10 |
| 1812-3 | | | K | ALL | 120 <0-999> | M | | 10 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|-------------|----------------------------------|----------------|---|--|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 1813-0 | Image control | Display of background voltage/upper limit actual value | Y | ALL | 170 <0-999> | M | Displays the upper limit value of the background voltage when printing is operated. (Unit: V) | 10 |
| 1813-1 | | | M | ALL | 170 <0-999> | M | | 10 |
| 1813-2 | | | C | ALL | 170 <0-999> | M | | 10 |
| 1813-3 | | | K | ALL | 170 <0-999> | M | | 10 |
| 1814-0 | Image control | Background voltage/lower limit actual value display | Y | ALL | 80 <0-999> | M | Displays the lower limit value of the background voltage when printing is operated. (Unit: V) | 10 |
| 1814-1 | | | M | ALL | 80 <0-999> | M | | 10 |
| 1814-2 | | | C | ALL | 80 <0-999> | M | | 10 |
| 1814-3 | | | K | ALL | 80 <0-999> | M | | 10 |
| 1815-0 | Image control | Contrast voltage/correction number of time display | Y | ALL | 0 <0-255> | M | Displays the actual number of time the contrast voltage has been corrected at the closed-loop control. | 10 |
| 1815-1 | | | M | ALL | 0 <0-255> | M | | 10 |
| 1815-2 | | | C | ALL | 0 <0-255> | M | | 10 |
| 1815-3 | | | K | ALL | 0 <0-255> | M | | 10 |
| 1816-0 | Image control | Laser power correction/number of time display | Y | ALL | 0 <0-255> | M | Displays the actual number of time the laser power has been corrected at the closed-loop control. | 10 |
| 1816-1 | | | M | ALL | 0 <0-255> | M | | 10 |
| 1816-2 | | | C | ALL | 0 <0-255> | M | | 10 |
| 1816-3 | | | K | ALL | 0 <0-255> | M | | 10 |
| 1817 | Image control | Laser power actual value display | PPC (black) | 92 <0-255> | M | Displays the laser power value when copying in the Black Mode. (Bit value) | 2 | |
| 1819 | Image control | Laser power correcting factor | PPC (black) | 100 <100-255> | M | Perform the correction of the setting 05-1817. (Unit: %) | 1 | |
| 1820 | Image control | Laser power actual value display | PRT (black) | 92 <0-255> | M | Displays the laser power value when printing in the Black Mode. (Bit value) | 2 | |
| 1821 | Image control | Laser power correcting factor | PRT (black) | 100 <100-255> | M | Perform the correction of the setting 05-1820. (Unit: %) | 1 | |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|---------------------------|-------------|----------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1822-0 | Transfer | 2nd transfer roller bias correction of trailing edge of paper | Plain paper | ALL | 92 <0-255> | M | Corrects the 2nd transfer roller bias output of the trailing edge of paper (05-227, 229, 230, 231 and 232). Correction factor: % | 14 |
| 1822-1 | | | Thick paper 1 | ALL | 88 <0-255> | M | | 14 |
| 1822-2 | | | Thick paper 2 | ALL | 90 <0-255> | M | | 14 |
| 1822-3 | | | Thick paper 3 | ALL | 90 <0-255> | M | | 14 |
| 1822-4 | | | OHP film | ALL | 90 <0-255> | M | | 14 |
| 1823-0 | Transfer | Display of intermediate level of 2nd transfer roller bias actual value of trailing edge of paper (Plain paper) | Single side | ALL (black) | 162 <0-255> | M | Displays the value of 2nd transfer roller bias when the actual printing is operated. (The value corrected in 05-1822 is displayed.) | 10 |
| 1823-1 | | | Reverse side at duplexing | ALL (black) | 139 <0-255> | M | | 10 |
| 1823-2 | | | Single side | ALL (color) | 150 <0-255> | M | | 10 |
| 1823-3 | | | Reverse side at duplexing | ALL (color) | 133 <0-255> | M | | 10 |
| 1825-0 | Transfer | Display of intermediate level of 2nd transfer roller bias actual value of trailing edge of paper (Thick paper 1) | Single side | ALL (black) | 149 <0-255> | M | | 10 |
| 1825-1 | | | Reverse side at duplexing | ALL (black) | 127 <0-255> | M | | 10 |
| 1825-2 | | | Single side | ALL (color) | 133 <0-255> | M | | 10 |
| 1825-3 | | | Reverse side at duplexing | ALL (color) | 121 <0-255> | M | | 10 |
| 1826-0 | Transfer | Display of intermediate level of 2nd transfer roller bias actual value of trailing edge of paper (Thick paper 2) | | ALL (black) | 157 <0-255> | M | | 10 |
| 1826-1 | | | | ALL (color) | 154 <0-255> | M | | 10 |
| 1827-0 | Transfer | Display of intermediate level of 2nd transfer roller bias actual value of trailing edge of paper (Thick paper 3) | | ALL (black) | 137 <0-255> | M | | 10 |
| 1827-1 | | | | ALL (color) | 137 <0-255> | M | | 10 |
| 1828-0 | Transfer | Display of intermediate level of 2nd transfer roller bias actual value of trailing edge of paper (OHP film) | | ALL (black) | 126 <0-255> | M | | 10 |
| 1828-1 | | | | ALL (color) | 126 <0-255> | M | | 10 |
| 1829-0 | Transfer | 1st transfer roller bias correction at deceleration | Thick paper 2 | ALL | 80 <0-100> | M | Corrects the 1st transfer roller bias output. Correction factor: % | 14 |
| 1829-1 | | | Thick paper 3 | ALL | 80 <0-100> | M | | 14 |
| 1829-2 | | | OHP film | ALL | 80 <0-100> | M | | 14 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|--|-------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1831 | Transfer | 1st transfer roller bias actual value display at deceleration (Thick paper 2) | | ALL (black) | 187 <0-255> | M | Displays the value of 1st transfer roller bias at deceleration when the actual printing is operated. (The value corrected in 05-1829 is displayed.) | 2 |
| 1832 | Transfer | 1st transfer roller bias actual value display at deceleration (Thick paper 3) | | ALL (black) | 187 <0-255> | M | | 2 |
| 1833 | Transfer | 1st transfer roller bias actual value display at deceleration (OHP film) | | ALL (black) | 187 <0-255> | M | | 2 |
| 1836 | Transfer | 1st transfer roller bias actual value display in low-speed color printing (Plain paper / Thick paper 1) | | ALL (color) | 178 <0-255> | M | Displays the actual value of the 1st transfer roller bias when the transfers of all colors (Y, M, C and K) have finished. This adjustment is valid only when the value of the code 08-497 is "1" (6 pages/minute). | 2 |
| 1839-0 | Transfer | 2nd transfer roller bias correction of leading/trailing edge of paper (Tab paper) | Intermediate level bias of trailing edge | ALL | 100 <0-100> | M | Corrects the 2nd transfer roller bias output of leading/trailing edge of paper (05-1840). (Correcting factor: %) | 14 |
| 1839-1 | | | Bias of leading/trailing edge | ALL | 90 <0-100> | M | | 14 |
| 1840-0 | Transfer | 2nd transfer roller bias output adjustment (Tab paper) | | ALL (black) | 153 <0-187> | M | As the value decreases, the 2nd transfer roller bias output increases correspondingly. The adjustment value becomes effective when the Setting Mode (08-544, 549 and 551) is 0 (invalid). | 14 |
| 1840-1 | | | | ALL (color) | 150 <0-187> | M | | 14 |
| 1841-0 | Transfer | 2nd transfer roller bias offsetting adjustment (Tab paper) | | ALL (black) | 5 <0-10> | M | Sets the offset amount of 2nd transfer roller bias. 0: -500V 1: -400V 2: -300V 3: -200V 4: -100V 5: 0V 6: +100V 7: +200V 8: +300V 9: +400V 10: +500V | 4 |
| 1841-1 | | | | ALL (color) | 5 <0-10> | M | | 4 |

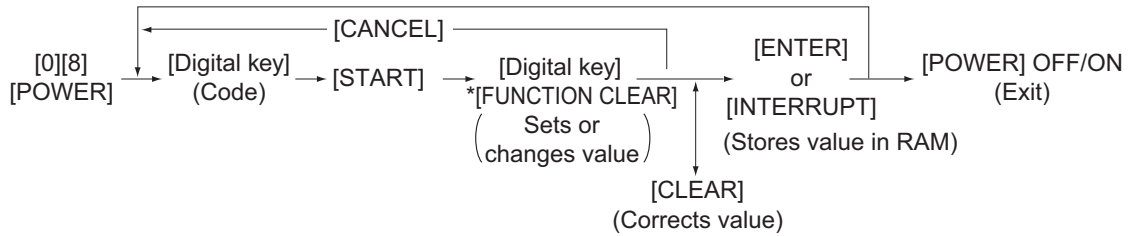
| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|--|--|-------------|----------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1842-0 | Transfer | Actual value display of 2nd transfer roller bias of leading/trailing edge of paper (Tab paper) | Intermediate level bias of trailing edge | ALL (black) | 153 <0-225> | M | Displays the value of 2nd transfer roller bias on the leading/trailing edge of paper when printing is performed. (The value corrected in 05-1839 is displayed.) | 10 |
| 1842-1 | | | Bias of leading/trailing edge | ALL (black) | 157 <0-225> | M | | 10 |
| 1842-2 | | | Intermediate level bias of trailing edge | ALL (color) | 150 <0-225> | M | | 10 |
| 1842-3 | | | Bias of leading/trailing edge | ALL (color) | 154 <0-225> | M | | 10 |
| 1845-0 | Transfer | 2nd transfer roller bias actual value display (Tab paper) | | ALL (black) | 153 <0-187> | M | Displays the value of 2nd transfer roller bias when printing is operated. | 10 |
| 1845-1 | | | | ALL (color) | 150 <0-187> | M | | 10 |
| 1847 | Transfer | 1st transfer roller bias actual value display (Tab paper) | | ALL | 400 <300-800> | M | The drum surface potential at the 1st transfer bias resistance detection control is adjusted. [Unit: V] | 1 |
| 1848 | Transfer | 1st transfer bias resistance detection control Result value display | | ALL | - <0-9999> | M | The result value of the 1st transfer bias resistance detection control is displayed. [Unit: V] | 2 |
| 1849 | Transfer | 1st transfer roller bias output adjustment | | ALL (black) | 154 <0-225> | M | When the value decreases, the 1st transfer roller bias output increases. This setting is enabled when "0" (disabled) is set at the codes 08-541, -549 and -551. | 1 |
| 1850-0 | Transfer | 1st transfer roller bias output adjustment | Y | ALL (color) | 138 <0-225> | M | When the value decreases, the 1st transfer roller bias output increases. This setting is enabled when "0" (disabled) is set at the codes 08-541, -549 and -551. | 4 |
| 1850-1 | | | M | ALL (color) | 143 <0-225> | M | | 4 |
| 1850-2 | | | C | ALL (color) | 154 <0-225> | M | | 4 |
| 1850-3 | | | K | ALL (color) | 154 <0-225> | M | | 4 |
| 1861 | Transfer | 1st transfer roller bias RMS value display | | ALL (black) | 154 <0-225> | M | The RMS value of the 1st transfer roller bias at the time of printing is displayed. | 2 |

| Adjustment mode (05) | | | | | | | | |
|----------------------|----------------|---|---|-------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1862-0 | Transfer | 1st transfer roller bias RMS value display | Y | ALL (color) | 138 <0-225> | M | The RMS value of the 1st transfer roller bias at the time of printing is displayed. | 10 |
| 1862-1 | | | M | ALL (color) | 143 <0-225> | M | | 10 |
| 1862-2 | | | C | ALL (color) | 154 <0-225> | M | | 10 |
| 1862-3 | | | K | ALL (color) | 154 <0-225> | M | | 10 |
| 1863 | Transfer | 1st transfer roller bias resistance detection Current offset adjustment | | ALL | 5 <0-10> | M | The current offset amount of the 1st transfer roller bias resistance detection is adjusted. 0: -10 1: -8 2: -6 3: -4 4: -2 5: 0 6: +2 7: +4 8: +6 9: +8 10: +10 [Unit: μ A] | 1 |
| 1864 | Transfer | 1st transfer roller bias correction at low-speed color printing | | ALL (color) | 100 <0-100> | M | The 1st transfer roller bias output after the completion of transfer of all colors (Y, M, C and K) is corrected. This setting is enabled when "1" (6 sheets/minute) is set at the code 08-497. | 1 |

2.2.5 Setting mode (08)

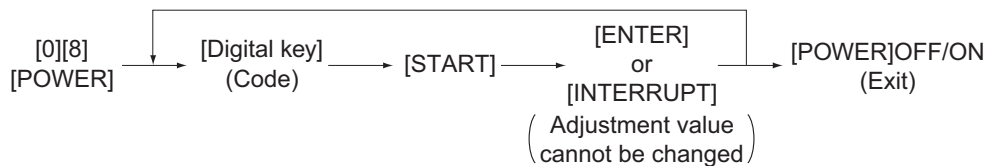
The items in the setting code list can be set or changed in this setting mode (08).
When the power should be turned OFF, be sure to shut down the equipment by pressing the [ENERGY SAVER] button for a few seconds.

Procedure 1



* Press [FUNCTION CLEAR] to enter minus (-).

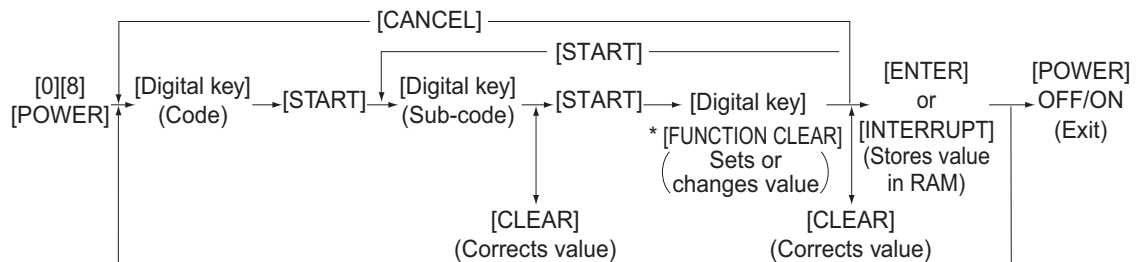
Procedure 2



Procedure 3

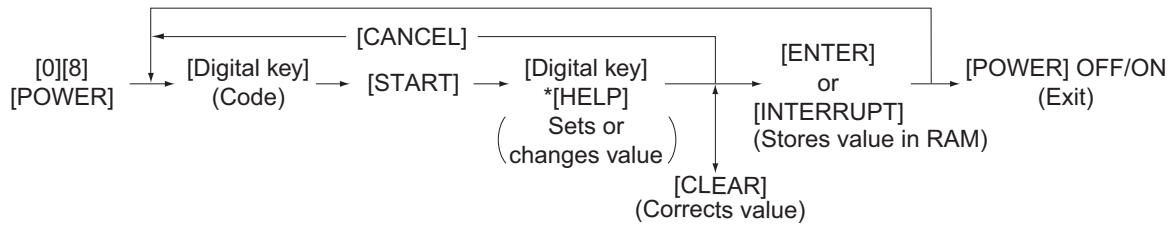


Procedure 4



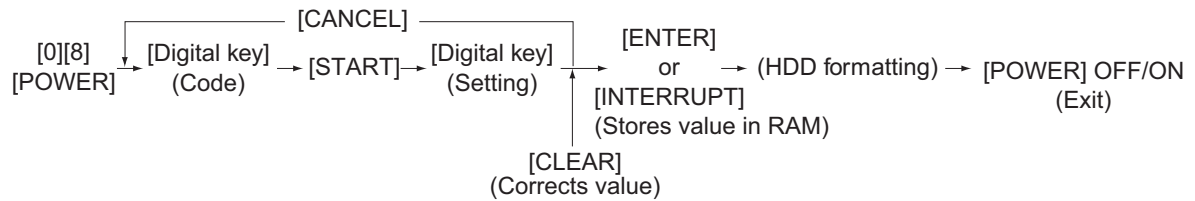
* Press [FUNCTION CLEAR] to enter minus (-).

Procedure 5

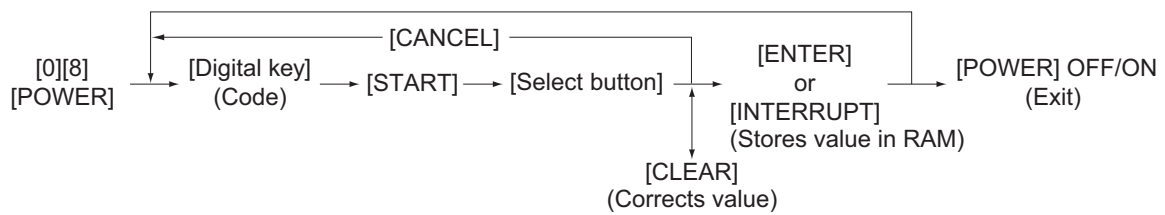


* Press [HELP] to enter "-".

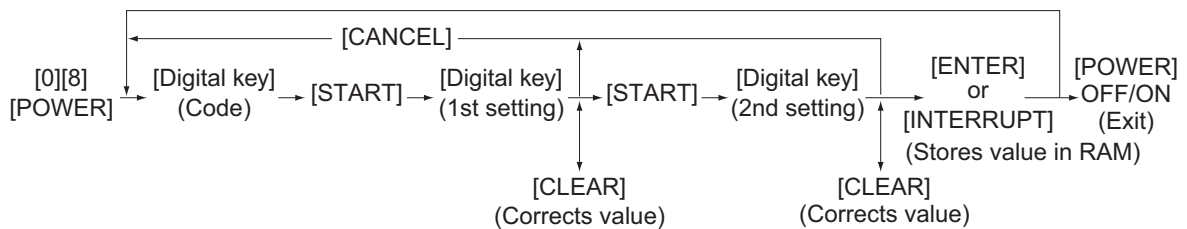
Procedure 7



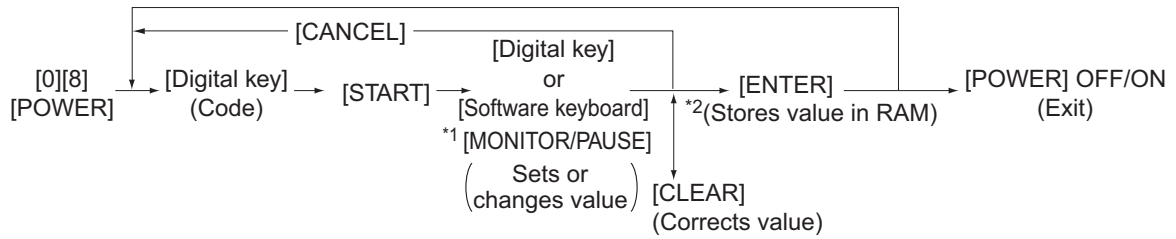
Procedure 9



Procedure 10

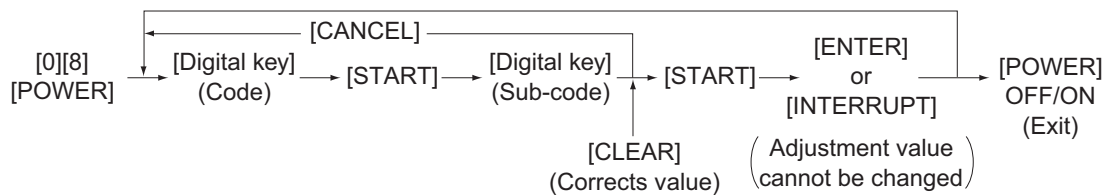


Procedure 11 and 12



- *1 Press [MONITOR/PAUSE] to enter "-", when entering telephone number.
- *2 The data are stored in SYS-RAM in procedure 11 and stored in NIC-RAM in procedure 12.

Procedure 14



Notes:

1. The digit after the hyphen in "Code" of the following table is a sub code.
2. In "RAM", the NVRAM of the board in which the data of each code is stored is indicated. "M" stands for the LGC board, "SYS", "NIC" and "UTY" stands for the SYS board.

| Setting mode (08) | | | | | | | |
|-------------------|----------------|------------------------------------|----------|------------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 200 | General | Date and time setting | ALL | - <13 digits> | - | Year/month/date/day/ hour/minute/second Example: 03 07 0 13 13 27 48 "Day" - "0" is for "Sunday". Proceeds Monday through Saturday from "1" to "6". | 5 |
| 201 | General | Destination selection | ALL | EUR: 0 UC: 1 JPN: 2 <0-3> | M | 0: EUR 1: UC 2: JPN 3: Other | 1 |
| 202 | User interface | Counter installed externally | ALL | 0 <0-4> | M | 0: No external counter 1: Coin controller 2: Copy key card 3: Key copy counter 4: Key card for OEM1 | 1 |
| 203 | General | Line adjustment mode | ALL | 0 <0-1> | M | 0: For factory shipment 1: For line * Field: "0" must be selected | 1 |
| 204 | User interface | Auto-clear timer setting | ALL | 3 <0-10> | SYS | Timer to return the equipment to the default settings when the [START] button is not pressed after the function and the mode are set 0: Not cleared 1 to 10: Set number x 15 sec. | 1 |
| 205 | User interface | Auto power save mode timer setting | ALL | 11 <0, 6-15> | SYS | Timer to automatically switch to the energy saving mode when the equipment has not been used 0: Invalid 6: 3min. 7: 4min. 8: 5min. 9: 7min. 10: 10min. 11: 15min. 12: 20min. 13: 30min. 14: 45min. 15: 60min. | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|-------------|------------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 206 | User interface | Auto Shut Off Mode timer setting (Sleep Mode) | ALL | Refer to content <0-20> | SYS | Timer to enter the Sleep Mode automatically when the equipment has not been used 0: 3min. 1: 5min. 2: 10min. 3: 15min. 4: 20min. 5: 25min. 6: 30min. 7: 40min. 8: 50min. 9: 60min. 10: 70min. 11: 80min. 12: 90min. 13: 100min. 14: 110min. 15: 120min. 16: 150min. 17: 180min. 18: 210min. 19: 240min. 20: Not used <Default value> e-STUDIO281c: 9 e-STUDIO351c: 9 e-STUDIO451c: 12 | 1 |
| 207 | User interface | Highlighting display on LCD | ALL | 0 <0-1> | SYS | 0: Black letter on white background 1: White letter on black background | 1 |
| 209 | User interface | Default setting of filing format when E-mailing (common in all color modes) | ALL (color) | 1 <0-4> | SYS | 0: TIFF (Multi) 1: PDF (Multi) 2: Not used 3: TIFF (Single) 4: PDF (Single) | 1 |
| 210 | Paper feeding | Paper size (A6-R) feeding/widthwise direction | PRT | 148/105 <148-432/105-297> | - | | 10 |
| 218 | User interface | Default setting of filing format when storing files (at color/ACS modes) | SCN (color) | 1 <0-4> | SYS | 0: TIFF (Multi) 1: PDF (Multi) 2: JPG 3: TIFF (Single) 4: PDF (Single) | 1 |
| 219 | User interface | Default setting of filing format when storing files (at black mode) | ALL (black) | 0 <0-4> | SYS | 0: TIFF (Multi) 1: PDF (Multi) 2: JPG 3: TIFF (Single) 4: PDF (Single) | 1 |
| 220 | User interface | Language displayed at power-ON | ALL | EUR: 0 UC: 0 JPN: 5 <0-6> | SYS | 0: Language 1 1: Language 2 2: Language 3 3: Language 4 4: Language 5 5: Language 6 6: Language 7 | 1 |
| 221 | User interface | Language selection in UI data at Web power ON | ALL | EUR: 0 UC: 0 JPN: 5 <0-6> | SYS | 0: Language 1 1: Language 2 2: Language 3 3: Language 4 4: Language 5 5: Language 6 6: Language 7 | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|------------------|--|----------|---|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 223 | Maintenance | Switching of output pages/ driving counts at PM | ALL | 0 <0-1> | M | Selects the reference to notify the PM timing. (The message is displayed on the LCD screen.) 0: PM counter (The number of output pages is set at 08- 251.) 1: PM time counter (The timing is set at 08-375.) | 1 |
| 224 | Paper feeding | Paper size for bypass feed | PPC | UNDEF | SYS | Press the button on the LCD to select the size. | 9 |
| 225 | Paper feeding | Paper size for upper drawer | ALL | EUR: A4 UC: LT JPN: A4 | M | Press the button on the LCD to select the size. | 9 |
| 226 | Paper feeding | Paper size for lower drawer | ALL | EUR: A3 UC: LD JPN: A3 | M | Press the button on the LCD to select the size. | 9 |
| 227 | Paper feeding | Paper size for PFP upper drawer | ALL | EUR: A4-R UC: LT-R JPN: A4-R | M | Press the button on the LCD to select the size. | 9 |
| 228 | Paper feeding | Paper size for PFP lower drawer | ALL | EUR: A4 UC: LG JPN: B4 | M | Press the button on the LCD to select the size. | 9 |
| 229 | Paper feeding | Paper size (A3) feeding/widthwise direction | ALL | 420/297 <182- 432/140- 297> | M | | 10 |
| 230 | Paper feeding | Paper size (A4-R) feeding/widthwise direction | ALL | 297/210 <182- 432/140- 297> | M | | 10 |
| 231 | Paper feeding | Paper size (A5-R) feeding/widthwise direction | ALL | 210/148 <182- 432/140- 297> | M | | 10 |
| 232 | Paper feeding | Paper size (B4) feeding/widthwise direction | ALL | 364/257 <182- 432/140- 297> | M | | 10 |
| 233 | Paper feeding | Paper size (B5-R) feeding/widthwise direction | ALL | 257/182 <182- 432/140- 297> | M | | 10 |
| 234 | Paper feeding | Paper size (LT-R) feeding/widthwise direction | ALL | 279/216 <182- 432/140- 297> | M | | 10 |
| 235 | Paper feeding | Paper size (LD) feeding/widthwise direction | ALL | 432/279 <182- 432/140- 297> | M | | 10 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 236 | Paper feeding | Paper size (LG) feeding/widthwise direction | ALL | 356/216 <182-432/140-297> | M | | 10 |
| 237 | Paper feeding | Paper size (ST-R) feeding/widthwise direction | ALL | 216/140 <182-432/140-297> | M | | 10 |
| 238 | Paper feeding | Paper size (COMPUTER) feeding/widthwise direction | ALL | 356/257 <182-432/140-297> | M | | 10 |
| 239 | Paper feeding | Paper size (FOLIO) feeding/widthwise direction | ALL | 330/210 <182-432/140-297> | M | | 10 |
| 240 | Paper feeding | Paper size (13"LG) feeding/widthwise direction | ALL | 330/216 <182-432/140-297> | M | | 10 |
| 241 | Paper feeding | Paper size (8.5"X8.5") feeding/widthwise direction | ALL | 216/216 <182-432/140-297> | M | | 10 |
| 242 | Paper feeding | Paper size (Non-standard) feeding/widthwise direction | ALL | 432/279 <148-432/105-297> | SYS | | 10 |
| 243 | Paper feeding | Memory 1 Paper size (bypass feeding/non-standard type) feeding/widthwise direction | ALL | 148/100 <148-432/100-297> | SYS | Registers the paper size of bypass feed (non-standard type) into [MEMORY 1]. | 10 |
| 244 | Paper feeding | Paper size (8K) feeding/widthwise direction | ALL | 390/270 <182-432/140-297> | M | | 10 |
| 245 | Paper feeding | Paper size (16K-R) feeding/widthwise direction | ALL | 270/195 <182-432/140-297> | M | | 10 |
| 246 | Paper feeding | Paper size (A3-wide) feeding/widthwise direction | ALL | 457/305 <182-457/140-305> | M | | 10 |
| 247 | Paper feeding | Memory 2 Paper size (bypass feeding/non-standard type) feeding/widthwise direction | ALL | 148/100 <148-432/100-297> | SYS | Registers the paper size of bypass feed (non-standard type) into [MEMORY 2]. | 10 |
| 248 | Paper feeding | Memory 3 Paper size (bypass feeding/non-standard type) feeding/widthwise direction | ALL | 148/100 <148-432/100-297> | SYS | Registers the paper size of bypass feed (non-standard type) into [MEMORY 3]. | 10 |
| 249 | Paper feeding | Memory 4 Paper size (bypass feeding/non-standard type) feeding/widthwise direction | ALL | 148/100 <148-432/100-297> | SYS | Registers the paper size of bypass feed (non-standard type) into [MEMORY 4]. | 10 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 250 | Maintenance | Service technician telephone number | ALL | 0 <32 digits> | SYS | A telephone number can be entered up to 32 digits. Use the [MONITOR/PAUSE] button to enter a hyphen(-). | 11 |
| 251 | Maintenance | Setting value of PM counter | ALL | Refer to content <8 digits> | M | <Default> e-STUDIO281c UC, EUR: 100,000 JPN: 0 e-STUDIO351c UC, EUR: 120,000 JPN: 0 e-STUDIO451c UC, EUR: 150,000 JPN: 0 | 1 |
| 252 | Maintenance | Current value of PM counter Display/0 clearing | ALL | 0 <8 digits> | M | Counts up when the registration sensor is ON. | 1 |
| 253 | Maintenance | Error history display | ALL | - | SYS | Displays the latest 20 errors data | 2 |
| 254 | Paper feeding | LT↔A4/LD↔A3 | PRT | 0 <0-1> | SYS | Sets whether the data is printed on the different but similar size paper or not when the paper of corresponding size is not available. 0: Valid (The data is printed on A4/A3 when LT/LD is selected or vice versa.) 1: Invalid (The message to use the selected paper size is displayed.) | 1 |
| 255 | Paper feeding | PPF/LCF installation | ALL | 0 <0-4> | M | 0: Automatic 1: PFP single-drawer type installed 2: PFP dual-drawer type installed 3: LCF installed 4: Not installed | 1 |
| 256 | Paper feeding | Paper size setting /LCF | ALL | EUR: A4 UC: LT JPN: A4 | M | Press the icon on the LCD to select the size. | 9 |
| 257 | Counter | Counter copy | ALL | - <1-2> | - | 1: Electrical counter -> Backup counter 2: Backup counter -> Electrical counter (P.2-196) | - |

| Setting mode (08) | | | | | | | |
|-------------------|-------------------|---|----------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 258 | Maintenance | FSMS acceptance | ALL | 1 <0-2> | SYS | Sets whether the FSMS connection is accepted or not. 0: Prohibited 1: Accepted (serial connection only) 2: Accepted (both serial and USB connections) | 1 |
| 259 | Network | Storage period at trail and private | PRT | 14 <0-35> | SYS | 0: No limits 1 to 30: 1 to 30 days 31: 1 hour 32: 2 hours 33: 4 hours 34: 8 hours 35: 12 hours | 1 |
| 260 | Network | Web data retention period | ALL | 10 <3 digits> | SYS | When a certain period of time has passed without operation after accessing TopAccess, the data being registered is automatically reset. This period is set at this code. (Unit: Minute) | 1 |
| 263 | User interface | Administrator's password (Maximum 10 digits) | ALL | 123456 <10 digits> | - | The password can be entered in alphabets and figures (A-Z, a-z and 0-9) within 10 digits. | 11 |
| 264 | Network | File retention period | ALL | 30 <0-999> | SYS | 0: No limits 1 to 999: 1 to 999 days | 1 |
| 265 | Network | Maximum data capacity at E-mailing | ALL | 30 <2-30> | SYS | 2 to 30 M bytes | 1 |
| 266 | Network | Maximum data capacity at Internet FAX | ALL | 30 <2-30> | SYS | 2 to 30 M bytes | 1 |
| 267 | Electronic filing | Full guarantee of documents in Electronic Filing when HDD is full | ALL | 0 <0-1> | SYS | Sets the file retention level when editing the files in the Electronic Filing (at CutDoc/SaveDoc command execution). 0: Not full retained 1: Fully retained • Retains the source file until CutDoc/SaveDoc command is completed. * The file is not deleted even if the HDD has become full during the execution of command when "1" is set. | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|-------------------|---|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 268 | User interface | Binarizing level selection (When judging as black in the ACS Mode) | ALL | 3 <1-5> | SYS | 0: Step -2 1: Step -1 2: Step 0 (center) 3: Step 1 4: Step 2 * The binarizing level of each step is set at 08-609. | 1 |
| 270 | Electronic filing | Default setting of user box retention period | ALL | 0 <0-999> | SYS | Sets the data retention period when creating a user box. 0: Not deleted 1 to 999: Retention period (Unit: Day) | 1 |
| 271 | General | Warning notification of the File Share and e-Filing partitions are filled | ALL | 90 <0-100> | SYS | Sets the percentage of HDD partition filled when warning notification is sent. 0 to 100: 0 to 100% * Related code 08-288 | 1 |
| 272 | Scanning | Notification setting of E-mail saving time limit | ALL | 3 <0-99> | SYS | Sets the days left the notification of E-mail saving time limit appears 0 to 99: 0 to 99 days | 1 |
| 273 | Scanning | Default setting of partial size when transmitting E-mail | ALL | 0 <0-6> | SYS | Sets the default value for the partial size of E-mail to be transmitted when creating a template. 0: Not divided 1: 64 2: 128 3: 256 4: 512 5: 1024 6: 2048 (Unit: KB) | 1 |
| 274 | FAX | Default setting of page by page when transmitting Internet FAX | ALL | 0 <0-4> | SYS | Sets the default value for the page by page of Internet FAX to be transmitted when creating a template. 0: Not divided 1: 256 2: 512 3: 1024 4: 2048 (Unit: KB) | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|-------------|----------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 276 | User interface | Default setting of density adjustment (Black) | SCN (black) | 0 <0-11> | SYS | 0: Automatic density 1: Step -5 2: Step -4 3: Step -3 4: Step -2 5: Step -1 6: Step 0 (center) 7: Step +1 8: Step +2 9: Step +3 10: Step +4 11: Step +5 (1 to 11: Manual density) | 1 |
| 277 | User interface | Default setting of background adjustment (Full Color) | SCN (color) | 3 <1-5> | SYS | 1: Step -2 2: Step -1 3: Step 0 (center) 4: Step +1 5: Step +2 | 1 |
| 278 | User interface | Default setting of color mode | SCN | 0 <0-4> | SYS | 0: Black 1: Gray Scale 2: Unused 3: Full Color 4: Auto Color | 1 |
| 279 | User interface | Default setting of resolution (Full Color) | SCN (color) | 2 <0-3> | SYS | 0: 100 dpi 1: 150 dpi 2: 200 dpi 3: 300dpi | 1 |
| 280 | User interface | Default setting of resolution (Gray Scale) | SCN (black) | 2 <0-4> | SYS | 0: 100 dpi 1: 150 dpi 2: 200 dpi 3: 300dpi 4: 400 dpi | 1 |
| 281 | User interface | Default setting of resolution (Black) | SCN (black) | 1 <0-4> | SYS | 0: 150 dpi 1: 200 dpi 2: 300 dpi 3: 400dpi 4: 600 dpi | 1 |
| 282 | User interface | Default setting of original mode (Full Color) | SCN (color) | 0 <0-2> | SYS | 0: Text 1: Photo 2: Printed Image | 1 |
| 283 | User interface | Default setting of original mode (Black) | SCN (black) | 0 <0-2> | SYS | 0: Text 1: Text/Photo 2: Photo | 1 |
| 284 | User interface | Default setting of scanning mode | SCN | 0 <0-2> | SYS | 0: Single 1: Book 2: Tablet | 1 |
| 285 | User interface | Default setting of rotation mode | SCN | 0 <0-3> | SYS | 0: 0 degree 1: 90 degrees 2: 180 degrees 3: 270 degrees | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------|--------------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 286 | User interface | Default setting of original paper size | ALL | 0 <0-22> | SYS | 0: Automatic 1: A3 2: A4 3: LD 4: LT 5: A4-R 6: A5-R 7: LT-R 8: LG 9: B4 10: B5 11: ST-R 12: COMP 13: B5-R 14: FOLIO 15: 13"LG 16: 8.5"x 8.5" 18: A6-R 19: Size mixed 20: 8K 21: 16K 22: 16K-R | 1 |
| 288 | General | Searching interval of deleting expired files and checking capacity of HDD partitions | ALL | 12 <1-24> | SYS | Sets the search interval of deleting expired files and checking capacity of HDD partitions. (Unit: Hour) * Related code 08-271 | 1 |
| 289 | User interface | Default setting of background adjustment (Gray Scale) | ALL | 3 <1-5> | SYS | 1: Step -2 2: Step -1 3: Step 0 (center) 4: Step +1 5: Step +2 | 1 |
| 290 | Network | Raw printing job (Duplex) | PRT | 1 <0-1> | SYS | 0: Valid 1: Invalid | 1 |
| 291 | Network | Raw printing job (Paper size) | PRT | EUR: 6 UC: 2 JPN: 6 <0 -13> | SYS | 0: LD 1: LG 2: LT 3: COMP 4: ST 5: A3 6: A4 7: A5 8: A6 9: B4 10: B5 11: FOLIO 12: 13 "LG 13: 8.5" x 8.5" | 1 |
| 292 | Network | Raw printing job (Paper type) | PRT | 0 <0-5> | SYS | 0: Plain paper 1: Thick paper 1 2: Thick paper 2 3: Thick paper 3 4: OHP film 5: Tab paper | 1 |
| 293 | Network | Raw printing job (Paper direction) | PRT | 0 <0-1> | SYS | 0: Portrait 1: Landscape | 1 |
| 294 | Network | Raw printing job (Staple) | PRT | 1 <0-1> | SYS | 0: Valid 1: Invalid | 1 |
| 295 | Network | Raw printing job (Exit tray) | PRT | 0 <0-6> | SYS | 0: Inner tray 1: Finisher tray 1 2: Finisher tray 2 3: Unused 4: Unused 5: Unused 6: Unused | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|-------------|-------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 296 | Network | Raw printing job (Number of form lines) | PRT | 1200 <500-12800> | SYS | Sets the number of form lines from 5 to 128. (A hundredfold of the number of form lines is defined as the setting value.) | 1 |
| 297 | Network | Raw printing job (PCL font pitch) | PRT | 1000 <44-9999> | SYS | Sets the font pitch from 0.44 to 99.99. (A hundredfold of the font pitch is defined as the setting value.) | 1 |
| 298 | Network | Raw printing job (PCL font size) | PRT | 1200 <400-99975> | SYS | Sets the font size from 4 to 999.75. (A hundredfold of the font size is defined as the setting value.) | 1 |
| 299 | Network | Raw printing job (PCL font number) | PRT | 0 <0-79> | SYS | Sets the PCL font number. | 1 |
| 300 | User interface | Maximum number of copy volume (MAX9) | PPC | 0 <0-2> | SYS | 0: 999 1: 99 2: 9 | 1 |
| 301-0 | Counter | Number of output pages at Full Color Mode in Copier Function | PPC (color) | 0 <8 digits> | SYS | Counts the output pages at the Full Color Mode in the Copier Function for each paper size according to the setting for the count setting of largesized paper (08-352) and the definition setting of large-sized paper (08-353). | 4 |
| 301-1 | | | | | | | |
| 301-2 | | | | | | | |
| 301-3 | | | | | | | |
| 301-4 | | | | | | | |
| 301-5 | | | | | | | |
| 301-6 | | | | | | | |
| 301-7 | | | | | | | |
| 301-8 | | | | | | | |
| 301-9 | | | | | | | |
| 301-10 | | | | | | | |
| 301-11 | | | | | | | |
| 301-12 | | | | | | | |
| 301-13 | | | | | | | |
| 301-14 | | | | | | | |
| 301-15 | | | | | | | |
| 301-16 | | | | | | | |
| 302 | User interface | Original counter display | PPC | EUR: 2 UC: 0 JPN: 0 <0, 2, 4> | SYS | Sets whether the original counter is displayed or not. 0: Not displayed 2: Displayed 4: Displayed (Double-sized original is counted as 2.) | 1 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|-------------|----------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 303-0 | Counter | Number of output pages at Full Color Mode in Printer Func- tion | A3 | PRT (color) | 0 <8 digits> | SYS | Counts the output pages at the Full Color Mode in the Printer Function for each paper size according to the setting for the count setting of largesized paper (08-352) and the definition setting of large-sized paper (08- 353). | 4 |
| 303-1 | | | A4 | | | | | |
| 303-2 | | | A5 | | | | | |
| 303-3 | | | A6 | | | | | |
| 303-4 | | | B4 | | | | | |
| 303-5 | | | B5 | | | | | |
| 303-6 | | | FOLIO | | | | | |
| 303-7 | | | LD | | | | | |
| 303-8 | | | LG | | | | | |
| 303-9 | | | LT | | | | | |
| 303-10 | | | ST | | | | | |
| 303-11 | | | COMP | | | | | |
| 303-12 | | | 13"LG | | | | | |
| 303-13 | | | 8.5" x 8.5" | | | | | |
| 303-14 | | | 16K | | | | | |
| 303-15 | | | 8K | | | | | |
| 303-16 | | | Others | | | | | |
| 304-0 | Counter | Number of output pages at Twin Color Mode in Copier Func- tion | A3 | PPC (color) | 0 <8 digits> | SYS | Counts the output pages at the Twin Color Mode in the Copier Function for each paper size according to the setting for the count setting of largesized paper (08-352) and the definition setting of large-sized paper (08- 353). | 4 |
| 304-1 | | | A4 | | | | | |
| 304-2 | | | A5 | | | | | |
| 304-3 | | | A6 | | | | | |
| 304-4 | | | B4 | | | | | |
| 304-5 | | | B5 | | | | | |
| 304-6 | | | FOLIO | | | | | |
| 304-7 | | | LD | | | | | |
| 304-8 | | | LG | | | | | |
| 304-9 | | | LT | | | | | |
| 304-10 | | | ST | | | | | |
| 304-11 | | | COMP | | | | | |
| 304-12 | | | 13"LG | | | | | |
| 304-13 | | | 8.5" x 8.5" | | | | | |
| 304-14 | | | 16K | | | | | |
| 304-15 | | | 8K | | | | | |
| 304-16 | | | Others | | | | | |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|-------------|----------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 305-0 | Counter | Number of output pages at Black Mode in Copier Function | A3 | PPC (black) | 0 <8 digits> | SYS | Counts the output pages at the Black Mode in the Copier Function for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large-sized paper (08- 353). | 4 |
| 305-1 | | | A4 | | | | | |
| 305-2 | | | A5 | | | | | |
| 305-3 | | | A6 | | | | | |
| 305-4 | | | B4 | | | | | |
| 305-5 | | | B5 | | | | | |
| 305-6 | | | FOLIO | | | | | |
| 305-7 | | | LD | | | | | |
| 305-8 | | | LG | | | | | |
| 305-9 | | | LT | | | | | |
| 305-10 | | | ST | | | | | |
| 305-11 | | | COMP | | | | | |
| 305-12 | | | 13"LG | | | | | |
| 305-13 | | | 8.5" x 8.5" | | | | | |
| 305-14 | | | 16K | | | | | |
| 305-15 | | | 8K | | | | | |
| 305-16 | | | Others | | | | | |
| 306-0 | Counter | Number of output pages at Black Mode in Printer Function | A3 | PRT (black) | 0 <8 digits> | SYS | Counts the output pages at the Black Mode in the Printer Function for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large-sized paper (08- 353). | 4 |
| 306-1 | | | A4 | | | | | |
| 306-2 | | | A5 | | | | | |
| 306-3 | | | A6 | | | | | |
| 306-4 | | | B4 | | | | | |
| 306-5 | | | B5 | | | | | |
| 306-6 | | | FOLIO | | | | | |
| 306-7 | | | LD | | | | | |
| 306-8 | | | LG | | | | | |
| 306-9 | | | LT | | | | | |
| 306-10 | | | ST | | | | | |
| 306-11 | | | COMP | | | | | |
| 306-12 | | | 13"LG | | | | | |
| 306-13 | | | 8.5" x 8.5" | | | | | |
| 306-14 | | | 16K | | | | | |
| 306-15 | | | 8K | | | | | |
| 306-16 | | | Others | | | | | |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|-------------|----------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 307-0 | Counter | Number of output pages at List Print Mode | A3 | PRT (black) | 0 <8 digits> | SYS | Counts the output pages at the List Print Mode for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of largesized paper (08- 353). | 4 |
| 307-1 | | | A4 | | | | | |
| 307-2 | | | A5 | | | | | |
| 307-3 | | | A6 | | | | | |
| 307-4 | | | B4 | | | | | |
| 307-5 | | | B5 | | | | | |
| 307-6 | | | FOLIO | | | | | |
| 307-7 | | | LD | | | | | |
| 307-8 | | | LG | | | | | |
| 307-9 | | | LT | | | | | |
| 307-10 | | | ST | | | | | |
| 307-11 | | | COMP | | | | | |
| 307-12 | | | 13"LG | | | | | |
| 307-13 | | | 8.5" x 8.5" | | | | | |
| 307-14 | | | 16K | | | | | |
| 307-15 | | | 8K | | | | | |
| 307-16 | | | Others | | | | | |
| 308-0 | Counter | Number of output pages in FAX Func- tion | A3 | FAX | 0 <8 digits> | SYS | Counts the output pages in the FAX Func- tion for each paper size according to the setting for the count setting of large-sized paper (08- 352) and the definition setting of large-sized paper (08-353). | 4 |
| 308-1 | | | A4 | | | | | |
| 308-2 | | | A5 | | | | | |
| 308-3 | | | A6 | | | | | |
| 308-4 | | | B4 | | | | | |
| 308-5 | | | B5 | | | | | |
| 308-6 | | | FOLIO | | | | | |
| 308-7 | | | LD | | | | | |
| 308-8 | | | LG | | | | | |
| 308-9 | | | LT | | | | | |
| 308-10 | | | ST | | | | | |
| 308-11 | | | COMP | | | | | |
| 308-12 | | | 13"LG | | | | | |
| 308-13 | | | 8.5" x 8.5" | | | | | |
| 308-14 | | | 16K | | | | | |
| 308-15 | | | 8K | | | | | |
| 308-16 | | | Others | | | | | |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|----|-------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 309-0 | Counter | Number of scanning pages at Full Color Mode in Copier Function | A3 | PPC (color) | 0 <8 digits> | SYS | Counts the scanning pages at the Full Color Mode in the Copier Function for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large-sized paper (08-353). | 4 |
| 309-1 | | | | | | | | |
| 309-2 | | | | | | | | |
| 309-3 | | | | | | | | |
| 309-4 | | | | | | | | |
| 309-5 | | | | | | | | |
| 309-6 | | | | | | | | |
| 309-7 | | | | | | | | |
| 309-8 | | | | | | | | |
| 309-9 | | | | | | | | |
| 309-10 | | | | | | | | |
| 309-11 | | | | | | | | |
| 309-12 | | | | | | | | |
| 309-13 | | | | | | | | |
| 309-14 | | | | | | | | |
| 309-15 | | | | | | | | |
| 309-16 | | | | | | | | |
| 310-0 | Counter | Number of scanning pages at Full Color Mode in Scanning Function | A3 | SCN (color) | 0 <8 digits> | SYS | Counts the scanning pages at the Full Color Mode in the Scanning Function for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large-sized paper (08-353). | 4 |
| 310-1 | | | | | | | | |
| 310-2 | | | | | | | | |
| 310-3 | | | | | | | | |
| 310-4 | | | | | | | | |
| 310-5 | | | | | | | | |
| 310-6 | | | | | | | | |
| 310-7 | | | | | | | | |
| 310-8 | | | | | | | | |
| 310-9 | | | | | | | | |
| 310-10 | | | | | | | | |
| 310-11 | | | | | | | | |
| 310-12 | | | | | | | | |
| 310-13 | | | | | | | | |
| 310-14 | | | | | | | | |
| 310-15 | | | | | | | | |
| 310-16 | | | | | | | | |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|-------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 311-0 | Counter | Number of scanning pages at Twin Color Mode in Copier Function | PPC (color) | 0 <8 digits> | SYS | Counts the scanning pages at the Twin Color Mode in the Copier Function for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large-sized paper (08-353). | 4 |
| 311-1 | | | | | | | |
| 311-2 | | | | | | | |
| 311-3 | | | | | | | |
| 311-4 | | | | | | | |
| 311-5 | | | | | | | |
| 311-6 | | | | | | | |
| 311-7 | | | | | | | |
| 311-8 | | | | | | | |
| 311-9 | | | | | | | |
| 311-10 | | | | | | | |
| 311-11 | | | | | | | |
| 311-12 | | | | | | | |
| 311-13 | | | | | | | |
| 311-14 | | | | | | | |
| 311-15 | | | | | | | |
| 311-16 | | | | | | | |
| 312-0 | Counter | Number of scanning pages at Black Mode in Copier Function | PPC (black) | 0 <8 digits> | SYS | Counts the scanning pages at the Black Mode in the Copier Function for each paper size according to the setting for the count setting of largesized paper (08-352) and the definition setting of large-sized paper (08-353). | 4 |
| 312-1 | | | | | | | |
| 312-2 | | | | | | | |
| 312-3 | | | | | | | |
| 312-4 | | | | | | | |
| 312-5 | | | | | | | |
| 312-6 | | | | | | | |
| 312-7 | | | | | | | |
| 312-8 | | | | | | | |
| 312-9 | | | | | | | |
| 312-10 | | | | | | | |
| 312-11 | | | | | | | |
| 312-12 | | | | | | | |
| 312-13 | | | | | | | |
| 312-14 | | | | | | | |
| 312-15 | | | | | | | |
| 312-16 | | | | | | | |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|-------------|----------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 313-0 | Counter | Number of scanning pages in Scanning Function | A3 | SCN (black) | 0 <8 digits> | SYS | Counts the scanning pages at the Black Mode in the Scanning Function for each paper size according to the setting for the count setting of largesized paper (08-352) and the definition setting of large-sized paper (08-353). | 4 |
| 313-1 | | | A4 | | | | | |
| 313-2 | | | A5 | | | | | |
| 313-3 | | | A6 | | | | | |
| 313-4 | | | B4 | | | | | |
| 313-5 | | | B5 | | | | | |
| 313-6 | | | FOLIO | | | | | |
| 313-7 | | | LD | | | | | |
| 313-8 | | | LG | | | | | |
| 313-9 | | | LT | | | | | |
| 313-10 | | | ST | | | | | |
| 313-11 | | | COMP | | | | | |
| 313-12 | | | 13"LG | | | | | |
| 313-13 | | | 8.5" x 8.5" | | | | | |
| 313-14 | | | 16K | | | | | |
| 313-15 | | | 8K | | | | | |
| 313-16 | | | Others | | | | | |
| 314-0 | Counter | Number of scanning pages in FAX Function | A3 | FAX | 0 <8 digits> | SYS | Counts the scanning pages in the FAX Function for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of largesized paper (08-353). | 4 |
| 314-1 | | | A4 | | | | | |
| 314-2 | | | A5 | | | | | |
| 314-3 | | | A6 | | | | | |
| 314-4 | | | B4 | | | | | |
| 314-5 | | | B5 | | | | | |
| 314-6 | | | FOLIO | | | | | |
| 314-7 | | | LD | | | | | |
| 314-8 | | | LG | | | | | |
| 314-9 | | | LT | | | | | |
| 314-10 | | | ST | | | | | |
| 314-11 | | | COMP | | | | | |
| 314-12 | | | 13"LG | | | | | |
| 314-13 | | | 8.5" x 8.5" | | | | | |
| 314-14 | | | 16K | | | | | |
| 314-15 | | | 8K | | | | | |
| 314-16 | | | Others | | | | | |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|-------------|----------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 315-0 | Counter | Number of transmitted pages in FAX Function | A3 | FAX | 0 <8 digits> | SYS | Counts the transmitted pages in the FAX Func- tion for each paper size according to the setting for the count setting of large-sized paper (08- 352) and the definition setting of largesized paper (08-353). | 4 |
| 315-1 | | | A4 | | | | | |
| 315-2 | | | A5 | | | | | |
| 315-3 | | | A6 | | | | | |
| 315-4 | | | B4 | | | | | |
| 315-5 | | | B5 | | | | | |
| 315-6 | | | FOLIO | | | | | |
| 315-7 | | | LD | | | | | |
| 315-8 | | | LG | | | | | |
| 315-9 | | | LT | | | | | |
| 315-10 | | | ST | | | | | |
| 315-11 | | | COMP | | | | | |
| 315-12 | | | 13"LG | | | | | |
| 315-13 | | | 8.5" x 8.5" | | | | | |
| 315-14 | | | 16K | | | | | |
| 315-15 | | | 8K | | | | | |
| 315-16 | | | Others | | | | | |
| 316-0 | Counter | Number of received pages in FAX Function | A3 | FAX | 0 <8 digits> | SYS | Counts the received pages in the FAX Func- tion for each paper size according to the setting for the count setting of large-sized paper (08- 352) and the definition setting of largesized paper (08-353). | 4 |
| 316-1 | | | A4 | | | | | |
| 316-2 | | | A5 | | | | | |
| 316-3 | | | A6 | | | | | |
| 316-4 | | | B4 | | | | | |
| 316-5 | | | B5 | | | | | |
| 316-6 | | | FOLIO | | | | | |
| 316-7 | | | LD | | | | | |
| 316-8 | | | LG | | | | | |
| 316-9 | | | LT | | | | | |
| 316-10 | | | ST | | | | | |
| 316-11 | | | COMP | | | | | |
| 316-12 | | | 13"LG | | | | | |
| 316-13 | | | 8.5" x 8.5" | | | | | |
| 316-14 | | | 16K | | | | | |
| 316-15 | | | 8K | | | | | |
| 316-16 | | | Others | | | | | |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|----------|----------------------------|--------------|----------|---|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 317-0 | Counter | Display of number of output pages at Full Color Mode in Copier Function | Large | PPC (color) | 0 <8 digits> | SYS | Counts the number of output pages at the Full Color Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 317-1 | Counter | | Small | PPC (color) | 0 <8 digits> | SYS | | 14 |
| 317-2 | Counter | | Total | PPC (color) | 0 <8 digits> | SYS | | 14 |
| 318-0 | Counter | Display of number of output pages at Full Color Mode in Printer Function | Large | PRT (color) | 0 <8 digits> | SYS | Counts the number of output pages at the Full Color Mode in the Printer Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 318-1 | Counter | | Small | PRT (color) | 0 <8 digits> | SYS | | 14 |
| 318-2 | Counter | | Total | PRT (color) | 0 <8 digits> | SYS | | 14 |
| 319-0 | Counter | Display of number of output pages at Twin Color Mode in Copier Function | Large | PPC (color) | 0 <8 digits> | SYS | Counts the number of output pages at the Twin Color Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 319-1 | Counter | | Small | PPC (color) | 0 <8 digits> | SYS | | 14 |
| 319-2 | Counter | | Total | PPC (color) | 0 <8 digits> | SYS | | 14 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-----------------|----------|--|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 320-0 | Counter | Display of number of output pages at Black Mode in Copier Function | Large | PPC (black) | 0 <8 digits> | SYS | Counts the number of output pages at the Black Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 320-1 | Counter | | Small | PPC (black) | 0 <8 digits> | SYS | | 14 |
| 320-2 | Counter | | Total | PPC (black) | 0 <8 digits> | SYS | | 14 |
| 321-0 | Counter | Display of number of output pages at Black Mode in Printer Function | Large | PRT (black) | 0 <8 digits> | SYS | Counts the number of output pages at the Black Mode in the Printer Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 321-1 | Counter | | Small | PRT (black) | 0 <8 digits> | SYS | | 14 |
| 321-2 | Counter | | Total | PRT (black) | 0 <8 digits> | SYS | | 14 |
| 322-0 | Counter | Display of number of output pages at List Print Mode | Large | PRT (black) | 0 <8 digits> | SYS | Counts the number of output pages at the List Print Mode Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 322-1 | Counter | | Small | PRT (black) | 0 <8 digits> | SYS | | 14 |
| 322-2 | Counter | | Total | PRT (black) | 0 <8 digits> | SYS | | 14 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|----------|----------------------------|-----------------|----------|--|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 323-0 | Counter | Display of number of output pages in FAX Function | Large | FAX | 0 <8 digits> | SYS | Counts the number of output pages in the FAX Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 323-1 | Counter | | Small | FAX | 0 <8 digits> | SYS | | 14 |
| 323-2 | Counter | | Total | FAX | 0 <8 digits> | SYS | | 14 |
| 324-0 | Counter | Display of number of scanning pages at Full Color Mode in Copier Function | Large | PPC (color) | 0 <8 digits> | SYS | Counts the number of scanning pages at the Full Color Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 324-1 | Counter | | Small | PPC (color) | 0 <8 digits> | SYS | | 14 |
| 324-2 | Counter | | Total | PPC (color) | 0 <8 digits> | SYS | | 14 |
| 325-0 | Counter | Display of number of scanning pages at Full Color Mode in Scanning Function | Large | SCN (color) | 0 <8 digits> | SYS | Counts the number of scanning pages at the Full Color Mode in the Scanning Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 325-1 | Counter | | Small | SCN (color) | 0 <8 digits> | SYS | | 14 |
| 325-2 | Counter | | Total | SCN (color) | 0 <8 digits> | SYS | | 14 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-----------------|----------|--|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 326-0 | Counter | Display of number of scanning pages at Twin Color Mode in Copier Function | Large | PPC (color) | 0 <8 digits> | SYS | Counts the number of scanning pages at the Twin Color Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 326-1 | Counter | | Small | PPC (color) | 0 <8 digits> | SYS | | 14 |
| 326-2 | Counter | | Total | PPC (color) | 0 <8 digits> | SYS | | 14 |
| 327-0 | Counter | Display of number of scanning pages at Black Mode in Copier Function | Large | PPC (black) | 0 <8 digits> | SYS | Counts the number of scanning pages at the Black Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 327-1 | Counter | | Small | PPC (black) | 0 <8 digits> | SYS | | 14 |
| 327-2 | Counter | | Total | PPC (black) | 0 <8 digits> | SYS | | 14 |
| 328-0 | Counter | Display of number of scanning pages in FAX Function | Large | FAX | 0 <8 digits> | SYS | Counts the number of scanning pages in the FAX Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 328-1 | Counter | | Small | FAX | 0 <8 digits> | SYS | | 14 |
| 328-2 | Counter | | Total | FAX | 0 <8 digits> | SYS | | 14 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|----------|----------------------------------|-----------------|---|---|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 329-0 | Counter | Display of number of scanning pages in Scanning Function | Large | SCN (black) | 0 <8 digits> | SYS | Counts the number of scanning pages in the Scanning Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 329-1 | Counter | | Small | SCN (black) | 0 <8 digits> | SYS | | 14 |
| 329-2 | Counter | | Total | SCN (black) | 0 <8 digits> | SYS | | 14 |
| 330-0 | Counter | Display of number of transmitted pages in FAX Function | Large | FAX | 0 <8 digits> | SYS | Counts the number of transmitted pages in the FAX Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 330-1 | Counter | | Small | FAX | 0 <8 digits> | SYS | | 14 |
| 330-2 | Counter | | Total | FAX | 0 <8 digits> | SYS | | 14 |
| 331 | User interface | Default setting of screen | ALL | 0 <0-3> | SYS | Sets the screen to be displayed after the auto-clear time has passed or it has recovered from the energy saving mode or sleep mode. 0: Copier 1: Fax 2: Scan 3: Box | 1 | |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|----------|----------------------------------|-----------------|--|--|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 332-0 | Counter | Display of number of received pages in FAX Function | Large | FAX | 0 <8 digits> | SYS | Counts the number of received pages in the FAX Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes. | 14 |
| 332-1 | Counter | | Small | FAX | 0 <8 digits> | SYS | | 14 |
| 332-2 | Counter | | Total | FAX | 0 <8 digits> | SYS | | 14 |
| 333-0 | Counter | Display of total number of pages at Full Color Mode | Large | ALL (color) | 0 <8 digits> | SYS | Displays the total number of pages at Full Color Mode in the Copier/Printer/Scanning Functions. | 14 |
| 333-1 | Counter | | Small | ALL (color) | 0 <8 digits> | SYS | | 14 |
| 333-2 | Counter | | Total | ALL (color) | 0 <8 digits> | SYS | | 14 |
| 334-0 | Counter | Display of total number of pages at Twin Color Mode | Large | ALL (color) | 0 <8 digits> | SYS | Displays the total number of pages at Twin Color Mode in the Copier Function. | 14 |
| 334-1 | Counter | | Small | ALL (color) | 0 <8 digits> | SYS | | 14 |
| 334-2 | Counter | | Total | ALL (color) | 0 <8 digits> | SYS | | 14 |
| 335-0 | Counter | Display of total number of pages at Black Mode | Large | ALL (black) | 0 <8 digits> | SYS | Displays the total number of pages at Black Mode in the Copier/Printer/Scanning/FAX Functions. | 14 |
| 335-1 | Counter | | Small | ALL (black) | 0 <8 digits> | SYS | | 14 |
| 335-2 | Counter | | Total | ALL (black) | 0 <8 digits> | SYS | | 14 |
| 342 | User interface | Displaying number of original pages placed on original glass | PPC | 0 <0-1> | SYS | This setting is whether the number of pages of originals placed on the original glass is displayed or not. 0: Not displayed 1: Displayed | 1 | |
| 343 | User interface | Black-free function | ALL | 0 <0-1> | SYS | 0: Disabled 1: Enabled When "1" (enabled) is set at this code, "1" (black) is automatically set at the code 08-588. | 1 | |
| 344 | Counter | Count setting of tab paper (PM) | ALL | 1 <0-1> | M | 0: Counted as 1 1: Counted as 2 | 1 | |
| 346 | Counter | Count setting of large-sized paper (PM) | ALL | 1 <0-1> | M | 0: Counted as 1 1: Counted as 2 | 1 | |
| 347 | Counter | Definition setting of large-sized paper (PM) | ALL | 1 <0-1> | M | 0: A3/LD 1: A3/LD/B4/LG/FOLIO/COMP | 1 | |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 348 | Counter | Count setting of thick paper (PM) | ALL | 1 <0-1> | M | 0: Counted as 1 1: Counted as 2 | 1 |
| 349 | Counter | Count setting of OHP film (PM) | ALL | 1 <0-1> | M | 0: Counted as 1 1: Counted as 2 | 1 |
| 352 | Counter | Count setting of large-sized paper (Fee charging system counter) | ALL | JPN: 0 OTHER: 1 <0-2> | M | 0: Counted as 1 1: Counted as 2 2: Counted as 1 (Mechanical counter is double counter) | 1 |
| 353 | Counter | Definition setting of large-sized paper (Fee charging system counter) | ALL | 0 <0-1> | M | 0: A3/LD 1: A3/LD/B4/LG/ FOLIO/COMP/8k | 1 |
| 356 | Counter | Counter for upper drawer feeding | ALL | 0 <8 digits> | M | Counts the number of sheets fed from upper drawer | 2 |
| 357 | Counter | Counter for lower drawer feeding | ALL | 0 <8 digits> | M | Counts the number of sheets fed from lower drawer | 2 |
| 358 | Counter | Counter for bypass feeding | ALL | 0 <8 digits> | M | Counts the number of sheets fed from bypass feed | 2 |
| 359 | Counter | Counter for LCF feeding | ALL | 0 <8 digits> | M | Counts the number of sheets fed from LCF | 2 |
| 360 | Counter | Counter for PFP upper drawer feeding | ALL | 0 <8 digits> | M | Counts the number of sheets fed from PFP upper drawer | 2 |
| 370 | Counter | Counter for PFP lower drawer feeding | ALL | 0 <8 digits> | M | Counts the number of sheets fed from PFP lower drawer | 2 |
| 372 | Counter | Counter for ADU | ALL | 0 <8 digits> | M | Counts the number of output pages of duplex printing. | 2 |
| 374 | Counter | Counter for RADF | ALL | 0 <8 digits> | SYS | Counts the number of originals fed from RADF | 2 |
| 375 | Maintenance | Setting value of PM time counter display/0 clearing | ALL | Refer to content <8 digits> | M | <Default> e-STUDIO281c JPN:0 UC, EUR: 315,000 e-STUDIO351c JPN:0 UC, EUR: 315,000 e-STUDIO451c JPN: 0 UC, EUR: 315,000 | 1 |
| 376 | Maintenance | Current value of PM time counter | ALL | 0 <8 digits> | M | Counts the drum driving time (main motor ON). | 1 |
| 381 | Counter | Setting for counter installed externally | ALL | 1 <0-7> | M | Selects the job to count up for the external counter. 0: Not selected 1: Copier 2: FAX 3: Copier/FAX 4: Printer 5: Copier/Printer 6: Printer/FAX 7: Copier/Printer/FAX | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|-------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 390 | Counter | Number of errors in HDD (Copying) | PPC | 0 <8 digits> | SYS | The number of error is reset at HDD formatting. | 2 |
| 391 | Counter | Number of errors in HDD (FAX) | FAX | 0 <8 digits> | SYS | | 2 |
| 392 | Counter | Number of errors in HDD (Scanning) | SCN | 0 <8 digits> | SYS | | 2 |
| 393 | Counter | Number of errors in HDD (Printer) | PRT | 0 <8 digits> | SYS | | 2 |
| 398 | Laser | Number of polygonal motor rotational speed switching | ALL | 0 <8 digits> | M | Counts the number of time the polygonal motor has switched its rotational speed between normal rotation and standby rotation | 2 |
| 399 | Laser | Accumulated time of polygonal motor at normal rotation | ALL | 0 <8 digits> | M | Accumulates the time the polygonal motor has rotated at normal rotation. | 2 |
| 400 | Fuser | Fuser unit error status counter | ALL | 0 <0-29> | M | 0: No error 1: C411 2: C412 3: C433 4: - 5: C445 6: C446 7: C447 8: - 9: C449 10: C475 11: C471 12: C472 13: - 14: - 15: C480 16: - 17: C490 18: - 19: C449 20: - 21: C449 22: C449 23: C449 24: C447 25: C449 26: - 27: C449 28: - 29: C449 | 1 |
| 409 | Fuser | Fuser roller temperature at a energy saver mode (Center thermistor) | ALL | 13 <0-16> | M | 0: OFF 1: 40°C 2: 45°C 3: 50°C 4: 55°C 5: 60°C 6: 65°C 7: 70°C 8: 75°C 9: 80°C 10: 85°C 11: 90°C 12: 95°C 13: 100°C 14: 105°C 15: 110°C 16: 115°C | 1 |
| 410-0 | Fuser | Fuser roller temperature during printing (Center thermistor/Plain paper) | ALL (black) | 12 <0-16> | M | 0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C | 4 |
| 410-1 | Fuser | | ALL (color) | 11 <0-16> | M | | 4 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|-------------|----------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 411 | Fuser | Fuser roller temperature on standby (Center thermistor) | ALL | 12 <0-16> | M | 0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C | 1 |
| 412-0 | Fuser | Fuser roller temperature during printing (Center thermistor/Thick paper 3) | ALL (black) | 12 <0-16> | M | 0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C | 4 |
| 412-1 | | | ALL (color) | 12 <0-16> | M | | 4 |
| 413-0 | Fuser | Fuser roller temperature during printing (Center thermistor/Thick paper 1) | ALL (black) | 12 <0-16> | M | 0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C | 4 |
| 413-1 | | | ALL (color) | 12 <0-16> | M | | 4 |
| 415-0 | Fuser | Period of time retaining print-start temperature (Thick paper 3) | ALL (black) | 3 <0-10> | M | 0: Invalid 1: 1 sec. 2: 2 sec 3: 3 sec 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 9 sec. 10: 10 sec. | 4 |
| 415-1 | | | ALL (color) | 2 <0-10> | M | | 4 |
| 416 | Fuser | Temperature setting to start solving abnormality (Center/Side thermistor/ Thick paper 3) | ALL | 9 <0-12> | M | 0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: Invalid | 1 |
| 417-0 | Fuser | Pre-running time for first printing (Thick paper 3) | ALL (black) | 16 <0-16> | M | 0: Invalid 1: 0 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 10 sec. 10: 12 sec. 11: 14 sec. 12: 16 sec. 13: 18 sec. 14: 20 sec. 15: 25 sec. 16: 30 sec. | 4 |
| 417-1 | | | ALL (color) | 0 <0-16> | M | | 4 |
| 422 | Fuser | Fuser roller temperature setting at the end of pre-running during warming-up | ALL | 4 <0-16> | M | 0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 428-0 | Fuser | Period of time retaining print-start temperature (Thick paper 2) | ALL (black) | 3 <0-10> | M | 0: Invalid 1: 1 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 9 sec. 10: 10 sec. | 4 |
| 428-1 | | | ALL (color) | 2 <0-10> | M | | 4 |
| 430 | Fuser | Transport motor speed deceleration (OHP film) | ALL (color) | 1 <0-3> | M | Sets deceleration ratio of paper transport speed. 0: 1/1 1: 1/2 2: 1/3 3: 1/4 | 1 |
| 431 | | Transport motor speed deceleration (Thick paper 2) | ALL (color) | 1 <0-3> | M | | 1 |
| 432 | | Transport motor speed deceleration (Thick paper 3) | ALL (color) | 2 <0-3> | M | | 1 |
| 436 | Fuser | Temperature setting to start solving abnormal- ity(Center/Side thermistor/ Thick paper2) | ALL | 9 <0-12> | M | 0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: Invalid | 1 |
| 437-0 | Fuser | Fuser roller temperature during printing (Center thermistor /Thick paper 2) | ALL (black) | 12 <0-16> | M | 0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C | 4 |
| 437-1 | | | ALL (color) | 12 <0-16> | M | | 4 |
| 438-0 | Fuser | Fuser roller temperature during printing (Center thermistor/OHP film) | ALL (black) | 12 <0-16> | M | 0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C | 4 |
| 438-1 | | | ALL (color) | 10 <0-16> | M | | 4 |
| 439-0 | Fuser | Pre-running time for first printing (Thick paper 2) | ALL (black) | 14 <0-16> | M | 0: Invalid 1: 0 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 10 sec. 10: 12 sec. 11: 14 sec. 12: 16 sec. 13: 18 sec. 14: 20 sec. 15: 25 sec. 16: 30 sec. | 4 |
| 439-1 | | | ALL (color) | 0 <0-16> | M | | 4 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 440-0 | Fuser | Pre-running time for first printing (Plain paper/Low temperature environment) | ALL (black) | 12 <0-16> | M | 0: Invalid 1: 0 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 10 sec. 10: 12 sec. | 4 |
| 440-1 | | | ALL (color) | 0 <0-16> | M | 11: 14 sec. 12: 16 sec. 13: 18 sec. 14: 20 sec. 15: 25 sec. 16: 30 sec. | 4 |
| 441-0 | Fuser | Pre-running time for first printing (Thick paper 1) | ALL (black) | 9 <0-16> | M | 0: Invalid 1: 0 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 10 sec. 10: 12 sec. | 4 |
| 441-1 | | | ALL (color) | 5 <0-16> | M | 11: 14 sec. 12: 16 sec. 13: 18 sec. 14: 20 sec. 15: 25 sec. 16: 30 sec. | 4 |
| 449 | Paper feeding | Switching for incorrect paper size jam detection | ALL | 0 <0-1> | M | 0: Enabled 1: Disabled | 1 |
| 458 | Fuser | Threshold for warming-up temperature(Low-temperature environment) | ALL | 6 <0-11> | M | 0: 0°C 1: 5°C 2: 9°C 3: 10°C 4: 12°C 5: 14°C 6: 15°C 7: 16°C 8: 17°C 9: 18°C 10: 19°C 11: 20°C | 1 |
| 459 | Fuser | Warming-up time(Low-temperature environment) | ALL | 7 <0-11> | M | 0: No warming-up 1: 30 sec. 2: 40 sec. 3: 50 sec. 4: 60 sec. 5: 70 sec. 6: 80 sec. 7: 90 sec. 8: 100 sec. 9: 120 sec. 10: 180 sec. 11: 300 sec. | 1 |
| 460 | Fuser | Threshold of temperature for pre-running time for first printing(Low-temperature environment) | ALL | 9 <0-11> | M | 0: 0°C 1: 5°C 2: 9°C 3: 10°C 4: 12°C 5: 14°C 6: 15°C 7: 16°C 8: 17°C 9: 18°C 10: 19°C 11: 20°C | 1 |
| 461 | Fuser | Pre-running time for first printing(Plain paper/Low-temperature environment) | ALL | 8 <0-11> | M | 0: Invalid (always) 1: 0 min. 2: 0.5 min. 3: 1 min. 4: 2 min. 5: 3 min. 6: 5 min. 7: 7 min. 8: 10 min. 9: 15 min. 10: 30 min. 11: 60 min. | 1 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|-------------|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 462 | RADF | Setting for switchback operation in mixed-size copying using RADF | | ALL | 0 <0-2> | M | <p>This setting is whether the original length is detected or not by transporting without scanning in reverse when A4-R/FOLIO paper or LT-R/LG paper is detected in a mixed-size copying.</p> <p>0: Disabled -</p> <p>AMS:</p> <p>A series - Judges as A4-R without transporting in reverse with no scanning.</p> <p>LT series - Judges whether it is LT-R or LG by its length without transporting in reverse with no scanning.</p> <p>APS:</p> <p>A series - Judges whether it is A4-R or FOLIO without transporting in reverse with no scanning.</p> <p>LT series - Judges whether it is LT-R or LG without transporting in reverse with no scanning.</p> <p>1: Enable 1</p> <p>AMS:</p> <p>A series - Judges whether it is A4-R or FOLIO by transporting without scanning in reverse to detect its length.</p> <p>LT series - Judges whether it is LT-R or LG by transporting without scanning in reverse to detect its length.</p> <p>APS:</p> <p>The same as that of APS in 0: Disabled.</p> <p>2: Enable 2</p> <p>AMS/APS:</p> <p>The same as that of AMS in 1: Enable 1.</p> | 1 |
| 463-0 | Paper feeding | Feeding retry number setting (upper drawer) | Plain paper | ALL | 5 <0-5> | M | Sets the number of times of the feeding retry from the upper drawer. | 4 |
| 463-1 | | | Others | ALL | 5 <0-5> | M | | 4 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|-------------|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 464-0 | Paper feeding | Feeding retry number setting (lower drawer) | Plain paper | ALL | 5 <0-5> | M | Sets the number of times of the feeding retry from the lower drawer. | 4 |
| 464-1 | | | Others | ALL | 5 <0-5> | M | | 4 |
| 465-0 | Paper feeding | Feeding retry number setting (PFP upper drawer) | Plain paper | ALL | 5 <0-5> | M | Sets the number of times of the feeding retry from the PFP upper drawer. | 4 |
| 465-1 | | | Others | ALL | 5 <0-5> | M | | 4 |
| 466-0 | Paper feeding | Feeding retry number setting (PFP lower drawer) | Plain paper | ALL | 5 <0-5> | M | Sets the number of times of the feeding retry from the PFP lower drawer. | 4 |
| 466-1 | | | Others | ALL | 5 <0-5> | M | | 4 |
| 467-0 | Paper feeding | Feeding retry number setting (bypass feed) | Plain paper | ALL | 5 <0-5> | M | Sets the number of times of the feeding retry from the bypass tray. | 4 |
| 467-1 | | | Others | ALL | 5 <0-5> | M | | 4 |
| 468-0 | Paper feeding | Feeding retry number setting (LCF) | Plain paper | ALL | 5 <0-5> | M | Sets the number of times of the feeding retry from the LCF. | 4 |
| 468-1 | | | Others | ALL | 5 <0-5> | M | | 4 |
| 470 | Paper feeding | Paper size (305x457 mm) feeding/widthwise direction | | ALL | 457/305 <148-457/105-305> | M | | 10 |
| 471 | Paper feeding | Paper size (Post card) feeding/widthwise direction | | ALL | 148/100 <148-432/100-297> | M | * Post card is supported only for JPN model. | 10 |
| 478 | Laser | Judged number of polygonal motor rotation error (Normal rotation) | | ALL | 0 <0-1> | M | Displays the error [CA10] when the set number of rotation error has been detected. 0: 2 times 1: 12 times | 1 |
| 479 | Laser | Judged number of polygonal motor rotation error (At acceleration/deceleration) | | ALL | 0 <0-1> | M | 0: Waiting time for polygonal motor rotation overshooting 0.6 sec. 1: Waiting time for polygonal motor rotation overshooting 2.2 sec. | 1 |
| 480 | Paper feeding | Default setting of paper source | | PPC | 0 <0-5> | SYS | 0: A4/LT 1: LCF 2: Upper drawer 3: Lower drawer 4: PFP upper drawer 5: PFP lower drawer | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 481 | Paper feeding | Automatic change of paper source | PPC | 1 <0-2> | SYS | Sets whether or not changing the drawer automatically to the other drawer with the paper of the same size when paper in the selected drawer has run out. 0: OFF 1: ON (Changes to the drawer with the same paper direction and size: ex. A4 to A4) 2: ON (Changes to the drawer with the same paper size. Paper with the different direction is acceptable as long as the size is the same: ex., A4 to A4-R, LT-R to LT. "1" is applied when the staple/holepunch is specified.) | 1 |
| 482 | Paper feeding | Feeding retry setting | ALL | 0 <0-1> | M | 0: ON 1: OFF | 1 |
| 483 | Laser | Pre-running rotation of polygonal motor | ALL | 0 <0-2> | SYS | Sets whether or not switching the polygonal motor from the standby rotation to the normal rotation when the original is set on the RADF or the platen cover is opened. 0: Valid (when using RADF and the original is set manually) 1: Invalid 2: Valid (when using RADF only) | 1 |
| 484 | Laser | Polygonal motor rotational status switching at the Auto Clear Mode | ALL | 0 <0-1> | SYS | Sets whether or not switching the polygonal motor from the normal rotation to the standby rotation at the Auto Clear Mode. 0: Valid 1: Invalid | 1 |
| 485 | Laser | Rotational status of polygonal motor on standby | ALL | 0 <0-1> | SYS | Sets the rotational status of polygonal motor on standby. 0: Rotated (The rotational speed is set at 08-490.) 1: Stopped | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|-------------|----------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 486 | Laser | Timing of auto-clearing of polygonal motor pre-running rotation | ALL | 0 <0-2> | SYS | Switches the polygonal motor to the standby rotation when a certain period of time has passed from the pre-running. At this code, the period to switch the status to the standby rotation is set. 0: 15 sec. 1: 30 sec. 2: 45 sec. * This setting is effective when "0" or "2" is set at 08-483. | 1 |
| 487 | Transfer | Selection of performing the 2nd transfer roller cleaning (Bypass feed) | ALL | 0 <0-1> | M | 0: Performs only at no paper size is designated 1: Performs regardless of designation of paper size | 1 |
| 488 | Laser | Setting of polygonal motor type | ALL | 3 <2-3> | M | Set the type of polygonal motor. 2: 2 clock type 3: 3 clock type | 1 |
| 489 | Laser | Polygonal motor rotation number on standby | ALL | 5 <0-5> | M | 0: 38090.55rpm 1: 35000rpm 2: 30000rpm 3: 25000rpm 4: 20000rpm 5: 10000rpm | 1 |
| 490 | Laser | Polygonal motor rotation in the energy saving mode | ALL | 0 <0-1> | M | 0: Stopped 1: 10000rpm. | 1 |
| 497 | General | Speed switching for color printing | ALL (color) | 0 <0-1> | M | Sets the speed for color printing. 0: 11 pages/minute 1: 6 pages/minute | 1 |
| 502 | Image | Error diffusion and dither setting at photo mode | PPC (black) | 0 <0-1> | SYS | Sets the image reproduction method at photo mode. 0: Error diffusion 1: Dither | 1 |
| 503 | User interface | Default setting of density adjustment | PPC (black) | 0 <0-1> | SYS | 0: Automatic 1: Manual (Center) | 1 |
| 511 | Main charger | Main charger wire auto-cleaning setting | ALL | 1 <0-1> | M | 0: Invalid 1: Valid | 1 |
| 526-0 | Fuser | Pre-running time for first printing (OHP film) | ALL (black) | 16 <0-16> | M | 0: Invalid 1: 0 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 10 sec. 10: 12 sec. 11: 14 sec. 12: 16 sec. 13: 18 sec. 14: 20 sec. 15: 25 sec. 16: 30 sec. | 4 |
| 526-1 | | | ALL (color) | 0 <0-16> | M | | 4 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 544 | Image control | Environment correction control of 2nd transfer roller bias | ALL | 1 <0-1> | M | Sets whether or not correcting the 2nd transfer roller bias depending on the environment. 0: Invalid 1: Valid | 1 |
| 545 | Image control | Transfer belt life correction of 2nd transfer roller bias | ALL | 1 <0-1> | M | Sets whether or not correcting the 2nd transfer roller bias depending on the transfer belt life. 0: Invalid 1: Valid | 1 |
| 546 | Image control | 2nd transfer roller life correction of 2nd transfer roller bias | ALL | 1 <0-1> | M | Sets whether or not correcting the 2nd transfer roller bias depending on the 2nd transfer roller life. 0: Invalid 1: Valid | 1 |
| 548 | Transfer | Setting of 2nd transfer roller bias table (for each destination/paper thickness) | ALL | EUR:0 UC:1 JPN:2 <0-2> | M | 0:80 g/m ² (21.3 lb.)/ EUR 1: 75 g/m ² (20 lb.)/UC 2: 64 g/m ² (17.1 lb.)/ JPN | 1 |
| 549 | Image control | Image quality control/open-loop control 1 | ALL | 1 <0-1> | M | Sets whether or not performing the open-loop control 1. The open-loop control 1 is performed in advance of the closed-loop control. 0: Invalid 1: Valid | 1 |
| 550 | Image | Default setting of Original mode | PPC (black) | 0 <0-3> | SYS | 0: Text/Photo 1: Photo 2: Text 3: Gray Scale | 1 |
| 551 | Image control | Image quality control/open-loop control 2 | ALL | 1 <0-1> | M | Sets whether or not performing the open-loop control 2. The open-loop control 2 is performed before or during printing. 0: Invalid 1: Valid | 1 |
| 552 | Image control | Drum life correction control | ALL | 1 <0-1> | M | Sets whether or not correcting the drum voltage depending on the drum life in open-loop control. 0: Invalid 1: Valid | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 553 | Image control | Drum temperature correction control | ALL | 1 <0-1> | M | Sets whether or not correcting the drum voltage depending on the drum surface temperature in open-loop control. 0: Invalid 1: Valid | 1 |
| 554 | Image control | Image quality open-loop control/Contrast voltage initial value | ALL | 1 <0-1> | M | Sets whether or not deciding the initial value of contrast voltage in open-loop control. 0: Invalid 1: Valid | 1 |
| 555 | Image control | Drum life correction of laser power initial value | ALL | 1 <0-1> | M | Sets whether or not correcting the laser power depending on the drum life when the laser power initial value is set in open-loop control. 0: Invalid 1: Valid | 1 |
| 556 | Image control | Image quality closed-loop control/Contrast voltage | ALL | 1 <0-1> | M | Sets whether or not correcting the contrast voltage in closed-loop control. 0: Invalid 1: Valid | 1 |
| 557 | Image control | Image quality closed-loop control/Laser power | ALL | 1 <0-1> | M | Sets whether or not correcting the laser power in closed-loop control. 0: Invalid 1: Valid | 1 |
| 558 | Image control | Contrast voltage/Correction gain environment setting | ALL | 1 <0-1> | M | Sets whether or not switching the correction amount once at contrast voltage correction depending on the environment. 0: Invalid 1: Valid | 1 |
| 559 | Image control | Image quality closed-loop control automatic start-up/At power-ON | ALL (color) | 1 <0-2> | M | Sets whether performing closed-loop control automatically at power-ON when the fuser roller temperature becomes below the specified level. 0: Invalid 1: Valid (at mode 1) 2: Valid (at mode 2) | 1 |
| 560 | Image1 | Process switching for image smoothing (Text/Photo) | PPC (black) | 1 <0-1> | M | Sets whether or not performing a smoothing process (primary scanning direction, 2,400 dpi or equivalent). 0: Invalid 1: Valid | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|-------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 561 | Image | Process switching for image smoothing (Photo) | PPC (black) | 0 <0-1> | M | Sets whether or not performing a smoothing process (primary scanning direction, 2,400 dpi or equivalent). 0: Invalid 1: Valid | 1 |
| 562 | Image | Process switching for image smoothing (Text) | PPC (black) | 1 <0-1> | M | | 1 |
| 565 | Image control | Image quality closed-loop control automatic start-up/ Relative humidity variation | ALL (color) | 1 <0-2> | M | Sets whether or not performing closed-loop control automatically when the relative humidity becomes below the specified level from the previous control. 0: Invalid 1: Valid (at mode 1) 2: Valid (at mode 2) | 1 |
| 566 | Image control | Image quality closed-loop control automatic start-up/ Period of time unattended | ALL (color) | 1 <0-2> | M | Sets whether or not performing closed-loop control automatically when the equipment has not been used for a specified period of time. 0: Invalid 1: Valid (at mode 1) 2: Valid (at mode 2) | 1 |
| 567 | Image control | Image quality closed-loop control automatic start-up/ Accumulated print volume | ALL (color) | 2 <0-2> | M | Sets whether or not performing closed-loop control automatically when the specified number of sheets has been printed out from the previous control. 0: Invalid 1: Valid (at mode 1) 2: Valid (at mode 2) | 1 |
| 568 | Image control | Image quality closed-loop control automatic start-up/ When recovered from "Toner empty" | ALL (color) | 2 <0-2> | M | Sets whether or not performing closed-loop control automatically when recovered from "Toner empty". 0: Invalid 1: Valid (at mode 1) 2: Valid (at mode 2) | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|-------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 569 | Image control | Image quality closed-loop control automatic start-up/ Temperature setting of fuser roller at power-ON | ALL (color) | 8 <0-20> | M | Sets the fuser roller temperature to perform closed-loop control when "1" or "2" (valid) is set in 08-559. 0: 20°C 1: 25°C 2: 30°C 3: 35°C 4: 40°C 5: 45°C 6: 50°C 7: 55°C 8: 60°C 9: 65°C 10: 70°C 11: 75°C 12: 80°C 13: 85°C 14: 90°C 15: 95°C 16: 100°C 17: 105°C 18: 110°C 19: 115°C 20: 120°C | 1 |
| 570 | Image control | Image quality closed-loop control automatic start-up/ Relative humidity difference setting | ALL (color) | 4 <0-6> | M | Sets the relative humidity difference to perform the closed-loop control when "1" or "2" (valid) is set in 08-565. 0: 0% 1: 5% 2: 10% 3: 15% 4: 20% 5: 25% 6: 30% | 1 |
| 571 | Image control | Image quality closed-loop control automatic start-up/ Setting of period of time unattended | ALL (color) | 4 <0-24> | M | Sets the period of time unattended to perform closed-loop control when "1" or "2" (valid) is set in 08-566. Setting value x 1 (hour) | 1 |
| 572 | Image control | Image quality closed-loop control automatic start-up/ Setting of accumulated print volume | ALL (color) | 10 <0-30> | M | Sets the number of accumulated print volume to perform closed-loop control when "1" or "2" (valid) is set in 08-567. Setting value x 100 (pages) | 1 |
| 573 | Image control | Abnormality detection count (Y) Display/0 clearing | ALL | 0 <0-16> | M | Counts the abnormality detection of image quality control. Accumulating total of [CE10], [CE20] and [CE40] | 1 |
| 574 | Image control | Abnormality detection count (M) Display/0 clearing | ALL | 0 <0-16> | M | Counts the abnormality detection of image quality control. Accumulating total of [CE10], [CE20] and [CE40] | 1 |
| 575 | Image control | Abnormality detection count (C) Display/0 clearing | ALL | 0 <0-16> | M | Counts the abnormality detection of image quality control. Accumulating total of [CE10], [CE20] and [CE40] | 1 |
| 576 | Image control | Abnormality detection count (K) Display/0 clearing | ALL | 0 <0-16> | M | Counts the abnormality detection of image quality control. Accumulating total of [CE10], [CE20] and [CE40] | 1 |

| Setting mode (08) | | | | | | | | |
|-------------------|-------------------|---|---------------------------------|----------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 583-0 | Fuser | Pre-running time at power- ON and ready status | Transport motor speed 1/1 | ALL | 1 <0-10> | M | 0: 3 sec. 1: 6 sec. 2: 9 sec. 3: 12 sec. 4: 15 sec. 5: 18 sec. 6: 21 sec. 7: 24 sec. 8: 27 sec. 9: 30 sec. 10: 33 sec. | 4 |
| 583-1 | | | Transport motor speed 1/2 | ALL | 4 <0-10> | M | | 4 |
| 583-2 | | | Transport motor speed 1/3 | ALL | 7 <0-10> | M | | 4 |
| 584 | Fuser | Transport motor speed of pre-running at ready status | | ALL | 0 <0-2> | M | 0: Decelerating to 1/1 1: Decelerating to 1/2 2: Decelerating to 1/3 | 1 |
| 585 | User interface | Default setting of Original mode | | PPC (color) | 0 <0-4> | SYS | 0: Text/Photo 1: Text 2: Printed image 3: Photo 4: Map | 1 |
| 586 | Image | Image quality switching when selecting the Image Smoothing Mode | | PPC (black) | 0 <0-1> | SYS | Selects the method of image processing when the Image Smoothing is selected in the original modes. 0: Processing for Image Smoothing 1: Processing when judging as black in the ACS Mode | 1 |
| 587 | User interface | Default setting of Density mode | | PPC (color) | 1 <0-1> | SYS | 0: Automatic 1: Manual (Center) | 1 |
| 588 | User interface | Default setting of Color mode | | PPC | 1 <0-2> | SYS | 0: Auto color 1: Black 2: Full color | 1 |
| 589 | Image | Image quality switching when judging as black in the ACS Mode | | PPC (black) | 1 <0-1> | SYS | Selects the method of image processing when the original is judged as black in the ACS Mode. 0: Processing for Image Smoothing 1: Processing when judging as black in the ACS Mode | 1 |
| 595 | Image | Scanning operation switch- ing at automatic calibration | | PPC (color) | 0 <0-1> | SYS | 0: Scanning color/ black integrated pat- tern 1: Scanning color pat- tern only | 1 |
| 597 | Image | Gamma correction table all clearing | | PRT (color) | - | SYS | Initializes the status of automatic gamma adjustment in color printing. | 3 |
| 602 | User interface | Screen setting for auto- matic energy saver/auto- matic power OFF | | ALL | EUR:0 UC:1 JPN:1 <0-1> | SYS | 0: OFF 1: ON | 1 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|-----------------|--|----------------|--|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 603 | User interface | Setting for automatic duplexing mode | ALL | 0 <0-3> | SYS | 0: Invalid 1: Single-sided to duplex copying 2: Two-sided to duplex copying 3: User selection | 1 | |
| 604 | User interface | Default setting for APS/AMS | ALL | 0 <0-2> | SYS | 0: APS (Automatic Paper Selection) 1: AMS (Automatic Magnification Selection) 2: Not selected | 1 | |
| 605 | User interface | Centering printing of primary/secondary direction at AMS | PPC | 1 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 607 | User interface | Default setting of RADF mode | PPC | 0 <0-1> | SYS | 0: Continuous feeding (by pressing the [START] button) 1: Single feeding (by setting original on the tray) | 1 | |
| 609-0 | Image | Binarizing level setting (When judging as black in the ACS Mode) | Step -2 | ALL | 88 <0-255> | SYS | Sets the binarizing level of each step. When the value increases, the image becomes darker. When the value decreases, the image becomes lighter. * Refer to 08-268. | 4 |
| 609-1 | | | Step -1 | ALL | 108 <0-255> | SYS | | 4 |
| 609-2 | | | Step 0 (center) | ALL | 148 <0-255> | SYS | | 4 |
| 609-3 | | | Step +1 | ALL | 178 <0-255> | SYS | | 4 |
| 609-4 | | | Step +2 | ALL | 208 <0-255> | SYS | | 4 |
| 610 | User interface | Key touch sound of control panel | ALL | 1 <0-1> | SYS | 0: OFF 1: ON | 1 | |
| 611 | User interface | Book type original priority | PPC | 0 <0-1> | SYS | 0: Left page to right page 1: Right page to left page | 1 | |
| 612 | General | Summer time mode | ALL | 0 <0-1> | SYS | 0: Not summer time 1: Summer time | 1 | |
| 613 | User interface | Paper size selection for [OTHER] button | PPC | EUR: FOLIO UC: COMP JPN: A5-R | SYS | Press the icon on the LCD to select the size. | 9 | |
| 614 | Network | Local I/F time-out period | ALL | 6 <1-50> | SYS | Sets the period of time when the job is judged as completed in local I/F printing (USB or parallel). 1: 1.0 sec. 2: 1.5 sec. 50: 25.5 sec. (in increments of 0.5 sec.) | 1 | |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------|------------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 615 | General | Size information of main memory and page memory | ALL | - | SYS | Displays the sizes of the main memory and page memory. Enables to check if each memory is properly recognized. | 2 |
| 616 | Counter | Counting method in Twin Color Mode (Limitation Function) | ALL | JPN: 1 UC: 0 EUR: 0 <0-1> | SYS | Sets the counting method in Twin Color Mode with the Limitation Function. 0: Count as color 1: Count as black | 1 |
| 617 | User interface | Print setting without department code | ALL | 1 <0-2> | SYS | 0: Printed forcibly 1: Not printed 2: Deleted forcibly | 1 |
| 618 | User interface | Default setting of RADF original size | PPC | 0 <0-1> | SYS | 0: Same size originals 1: Mixed size originals | 1 |
| 619 | Paper feeding | Time lag before auto-start of bypass feeding | ALL | 4 <0-10> | SYS | Sets the time taken to add paper feeding when paper in the bypass tray has run out during the bypass feed copying. 0: Paper is not drawn in unless the [START] button is pressed. 1-10: Setting value x 0.5sec. | 1 |
| 620 | User interface | Department management setting (Copier) | PPC | 1 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 621 | User interface | Department management setting (FAX) | FAX | 1 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 622 | User interface | Department management setting (Printer) | PRT | 1 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 623 | User interface | Department management setting (Scanner) | SCN | 1 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 624 | User interface | Department management setting (List print) | PRT | 1 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 625 | User interface | Blank copying prevention mode during RADF jamming | PPC | 0 <0-1> | SYS | 0: OFF 1: ON (Start printing when the scanning of each page is finished) | 1 |
| 627 | User interface | Rotation printing at the nonsorting | ALL | 0 <0-1> | SYS | 0: Not rotating 1: Rotating | 1 |
| 628 | User interface | Direction priority of original image | PPC | 0 <0-1> | SYS | 0: Automatic 1: Portrait | 1 |
| 629 | User interface | Department management setting | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 632 | User interface | Automatic calibration disclosure level | PPC | 1 <0-2> | SYS | Sets the disclosing level of automatic calibration. 0: Service technician 1: Administrator 2: User | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|--------------------|--|-------------|---------------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 633 | Data overwrite kit | Releasing F200 service call | ALL | 0 <0-2> | SYS | 0: Not used 1: Board installed 2: Service call | 1 |
| 634 | User interface | Inner receiving tray priority at Non-sort Mode | ALL | 0 <0-1> | SYS | 0: Normal 1: Inner receiving tray | 1 |
| 636 | User interface | Width setting for image shift copying (linkage of front side and back side) | PPC | 0 <0-1> | SYS | 0: ON 1: OFF | 1 |
| 638 | General | Time differences | ALL | EUR: 24 UC: 40 JPN: 6 <0-47> | SYS | 0: +12.0h 1: +11.5h 2: +11.0h 3: +10.5h 4: +10.0h 5: 9.5h 6: +9.0h 7: +8.5h 8: +8.0h 9: +7.5h 10: +7.0h 11: +6.5h 12: +6.0h 13: +5.5h 14: +5.0h 15: +4.5h 16: +4.0h 17: +3.5h 18: +3.0h 19: +2.5h 20: +2.0h 21: +1.5h 22: +1.0h 23: +0.5h 24: 0.0h 25: -0.5h 26: -1.0h 27: -1.5h 28: -2.0h 29: -2.5h 30: -3.0h 31: -3.5h 32: -4.0h 33: -4.5h 34: -5.0h 35: -5.5h 36: -6.0h 37: -6.5h 38: -7.0h 39: -7.5h 40: -8.0h 41: -8.5h 42: -9.0h 43: -9.5h 44: -10.0h 45: -10.5h 46: -11.0h 47: -11.5h | 1 |
| 640 | User interface | Date display format | ALL | EUR:1 UC:2 JPN:0 <0-2> | SYS | 0: YYYY.MM.DD. 1: DD.MM.YYYY 2: MM.DD.YYYY | 1 |
| 641 | User interface | Automatic Sorting Mode setting (RADF) | PPC | 2 <0-4> | SYS | 0: Invalid 1: STAPLE 2: SORT 3: GROUP 4: ROTATE SORT | 1 |
| 642 | User interface | Default setting of Sorter Mode | PPC | 0 <0-4> | SYS | 0: NON-SORT 1: STAPLE 2: SORT 3: GROUP 4: ROTATE SORT | 1 |
| 643 | User interface | Color 1 at twin color selection (Select what color black in original is copied) | PPC (color) | 0 <0-6> | SYS | 0: K 1: Y 2: M 3: C 4: R 5: G 6: B | 1 |
| 644 | User interface | Color 2 at twin color selection (Select what color other than black in original is copied) | PPC (color) | 4 <0-6> | SYS | 0: K 1: Y 2: M 3: C 4: R 5: G 6: B | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 645 | User interface | Correction of reproduction ratio in editing copy | PPC | 10 <0-10> | SYS | Sets the reproduction ratio for the "X in 1" printing (including magazine sort) to the "Reproduction ratio x Correction ratio". 0: 90% 1: 91% 2: 92% 3: 93% 4: 94% 5: 95% 6: 96% 7: 97% 8: 98% 9: 99% 10: 100% | 1 |
| 646 | User interface | Image position in editing | PPC | 0 <0-1> | SYS | Sets the page pasted position for "X in 1" to the upper left corner/center. 0: Cornering 1: Centering | 1 |
| 648 | User interface | Returning finisher tray when printing is finished | ALL | 0 <0-1> | SYS | Sets whether or not returning the finisher tray to the bin 1 when printing is finished. 0: Not returned 1: Returned | 1 |
| 649 | User interface | Magazine sort setting | PPC | 0 <0-1> | SYS | 0: Left page to right page 1: Right page to left page | 1 |
| 650 | User interface | 2 in 1/4 in 1 page allocating order setting | PPC | 0 <0-1> | SYS | 0: Horizontal 1: Vertical | 1 |
| 651 | User interface | Printing format setting for Time Stamp and Page Number | PPC | 2 <0-3> | SYS | Hyphen (with page number) /Dropout (with date, time and page number) 0: OFF/OFF 1: ON/OFF 2: OFF/ON 3: ON/ON Note: Hyphen printing format ON: -1- OFF: 1 | 1 |
| 652 | User interface | Cascade operation setting | PPC | 0 <0-1> | SYS | 0: OFF 1: ON | 1 |
| 653 | User interface | Cascade operation setting | PRT | 0 <0-1> | SYS | 0: OFF 1: ON | 1 |
| 657 | User interface | Default setting of printing direction for Time Stamp and Page Number | PPC | 0 <0-1> | SYS | 0: Short edge 1: Long edge | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-----------|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 658 | User interface | Auto-start setting for bypass feed printing | PRT | 0 <0-1> | SYS | Sets whether or not feeding a paper automatically into the copier when it is placed on the bypass tray. 0: OFF (Press the [START] button to start feeding.) 1: ON (Automatic feeding) | 1 |
| 659 | User interface | Auto-start setting for bypass feed printing | PPC | 1 <0-1> | SYS | Sets whether or not feeding a paper automatically into the copier when it is placed on the bypass tray. 0: OFF (Press the [START] button to start feeding.) 1: ON (Automatic feeding) | 1 |
| 660 | Network | Auto-forwarding setting of received FAX | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 661 | Network | Auto-forwarding setting of received E-mail | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 662 | General | Clearing of SMS partition | ALL | - | SYS | Clears SMS partition. (Performs when the service call [F106] has occurred.) | 3 |
| 663 | Counter | Counting method in Twin Color Mode | PPC | 0 <0-2> | SYS | Sets the counting method of fee charging or department count in Twin Color Mode. 0: Count as Twin Color Mode 1: Count as Black Mode 2: Count as Full Color Mode | 1 |
| 665 | General | M/SYS all clearing | ALL | - | M/ SYS | Initializes all the adjustment modes and setting modes. | 3 |
| 666 | General | BOX partition clearing | ALL | - | SYS | Initializes the Electronic Filing. | 3 |
| 667 | General | /SHA partition clearing | ALL | - | SYS | Initializes the shared folder. | 3 |
| 669 | General | System all clearing | ALL | - | SYS | Initializes system NVRAM area. | 3 |
| 670 | General | HDD diagnostic menu display | ALL | - | SYS | Display the HDD information (Ch.5.3.6) | 2 |
| 671 | User interface | Size indicator | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|------------------|----------------------------------|------------|----------|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 672 | General | Initialization of department management information | | - | - | SYS | <p>Initializing of the department management information</p> <p>* Enter the code with the digital keys and press the [INITIALIZE] button to perform the initialization.</p> <p>If the area storing the department management information is destroyed for some reason, "Enter Department Code" is displayed on the control panel even if the department management function is not set on. In this case, initialize the area with this code. This area is normally initialized at the factory.</p> | 3 |
| 675-0 | Paper feeding | Coated Paper Mode setting for paper source | Upper drawer | ALL | 0 <0-1> | SYS | <p>Sets whether or not applying the Coated Paper Mode to each paper source.</p> <p>0: Normal mode 1: Coated Paper Mode</p> <p>* Coated Paper Mode - This mode is selected when the paper which often causes the misfeeding (ex. coated paper) is used. The occurrence of misfeeding is reduced by lengthening the jam detection time. However, the printing speed is lowered since the printing cycle is also lengthened with the lengthened jam detection time.</p> | 4 |
| 675-1 | | | Lower drawer | ALL | 0 <0-1> | SYS | | 4 |
| 675-2 | | | PFP upper drawer | ALL | 0 <0-1> | SYS | | 4 |
| 675-3 | | | PFP lower drawer | ALL | 0 <0-1> | SYS | | 4 |
| 675-4 | | | LCF | ALL | 0 <0-1> | SYS | | 4 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|---------------|----------------------------------|------------|--|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 676 | Paper feeding | Bypass copy printing [COATED] button display | PPC | 0 <0-1> | SYS | Sets whether or not displaying the [COATED] button on the LCD screen at bypass feeding. 0: Not displayed 1: Displayed (The Coated Paper Mode is applied by pressing the [COATED] button at bypass feeding.) * Coated Paper Mode - This mode is selected when the paper which often causes the misfeeding (ex. coated paper) is used. The occurrence of misfeeding is reduced by lengthening the jam detection time. However, the printing speed is lowered since the printing cycle is also lengthened with the lengthened jam detection time. | 1 | |
| 677-0 | Paper feeding | Coated Paper Mode setting at bypass feeding | Plain paper | PRT | 0 <0-1> | SYS | Sets whether or not applying the Coated Paper Mode on each paper type at bypass printing. 0: Normal mode 1: Coated Paper Mode * Coated Paper Mode - This mode is selected when the paper which often causes the misfeeding (ex. coated paper) is used. The occurrence of misfeeding is reduced by lengthening the jam detection time. However, the printing speed is lowered since the printing cycle is also lengthened with the lengthened jam detection time. | 4 |
| 677-1 | | | Thick paper 1 | PRT | 0 <0-1> | SYS | | 4 |
| 677-2 | | | Thick paper 2 | PRT | 0 <0-1> | SYS | | 4 |
| 677-3 | | | Thick paper 3 | PRT | 0 <0-1> | SYS | | 4 |
| 677-4 | | | OHP film | PRT | 0 <0-1> | SYS | | 4 |
| 677-5 | | | Envelop | PRT | 0 <0-1> | SYS | | 4 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 678 | General | Setting of banner advertising display | ALL | 0 <0-1> | SYS | Sets whether or not displaying the banner advertising. The setting contents of 08-679 and 08-680 are displayed at the time display section on the right top of the screen. When both are set, each content is displayed alternately. 0: Not displayed 1: Displayed | 1 |
| 679 | General | Banner advertising display 1 | ALL | - | SYS | Maximum 27 letters (one-byte character) | 11 |
| 680 | General | Banner advertising display 2 | ALL | - | SYS | Maximum 27 letters (one-byte character) | 11 |
| 681 | General | Display of [BANNER MESSAGE] button | ALL | 0 <0-1> | SYS | 0: Not displayed 1: Displayed * This button enables the entry of "Banner advertising display 1 (08-679)" and "Banner advertising display 2 (08-680)" on the control panel. | 1 |
| 682 | Use interface | Offsetting between jobs | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 683 | General | Duplex printing setting when coin controller is used | ALL | 1 <0-1> | SYS | When the duplex printing is short paid with a coin controller, reverse side of the original is not printed and is considered as a defect (printing job may be cleared). To solve this problem, the selection of printing method is enabled with this setting. 0: Invalid (Both sides printed) 1: Valid (Only one side printed) | 1 |
| 684 | General | Rebuilding all databases | ALL | - | SYS | Rebuilds all databases. | 3 |
| 685 | General | Rebuilding all databases related to Address Book | ALL | - | SYS | Rebuilds all databases related to the Address Book. | 3 |
| 686 | General | Rebuilding all databases related to log | ALL | - | SYS | Rebuilds all databases related to the logs. | 3 |
| 689 | FAX | Adaptation of paper source priority selection | FAX | 0 <0-1> | SYS | 0: Not subjected for APS judgment 1: Subjected for APS judgment | 1 |
| 690 | General | HDD formatting | ALL | - <2> | SYS | 2: Normal formatting | 7 |
| 691 | General | HDD type display | ALL | - <0-2> | SYS | 0: Not formatted 1: Not used 2: Normal format | 7 |

| Setting mode (08) | | | | | | | |
|-------------------|-----------------|---|----------|---|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 692 | Maintenance | Performing panel calibration | ALL | - | SYS | Performs the calibration of the pressing position on the touch panel (LCD screen). The calibration is performed by pressing 2 reference positions after this code is started up. | 1 |
| 693 | General | Initialization of NIC information | ALL | - | SYS | Returns the value to the factory shipping default value. | 3 |
| 694 | General | Performing HDD testing | ALL | - | SYS | Checks the bad sector. | 3 |
| 696 | Scrambler board | Installation of scrambler board (Option) | ALL | 0 <0-1> | - | 0: Not installed 1: Installed | 2 |
| 697 | Paper feeding | Paper type priority | PPC | 1 <1-2> | SYS | Sets the paper type priority during copying. 1: Normal paper 2: Thick paper 1 | 1 |
| 698 | Scrambler board | Entering the key code for scrambler board | ALL | - | - | Start up this code and have the user enter the key code. Once the key code has been set, this code cannot be set again on security grounds. | 5 |
| 699 | Scrambler board | Erasing all data in HDD | ALL | - | - | This setting is effective only when the scrambler board is installed. | 3 |
| 701 | FAX | Destination setting for FAX | FAX | EUR: 5 UC: 4 JPN: 0 Other: 1 <0-25> | SYS | 0: Japan 1: Asia 2: Australia 3: Hong Kong 4: U.S.A./Canada 5: Germany 6: U.K. 7: Italy 8: Belgium 9: Netherlands 10: Finland 11: Spain 12: Austria 13: Switzerland 14: Sweden 15: Denmark 16: Norway 17: Portugal 18: France 19: Greece 20: Poland 21: Hungary 22: Czech 23: Turkey 24: South Africa 25: Taiwan | 1 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------------|---|-------------------------|----------|---|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 702 | Maintenance | Remote-controlled service function | | ALL | 2 <0-2> | SYS | 0: Valid (Remote-controlled server) 1: Valid (L2) 2: Invalid | 1 |
| 703 | Maintenance | Remote-controlled service HTTP server URL setting | | ALL | - | SYS | Maximum 256 Bytes | 11 |
| 704-0 | | Interruption of stapling operation (no staple) | Copying | ALL | 1 <0-1> | SYS | 0: Continues printing by switching sort setting 1: Interrupts printing | 11 |
| 704-1 | | | Printing / BOX printing | ALL | 1 <0-1> | SYS | 0: Continues printing by switching sort setting 1: Interrupts printing | 4 |
| 707 | Maintenance | Remote-controlled service HTTP initially-registered server URL setting | | ALL | https:// device.mf p-sup- port.com: 443/ device/fir- streg- ist.ashx | SYS | Maximum 256 Bytes | 11 |
| 710 | Maintenance (Remote) | Short time interval setting of recovery from Emergency Mode | | ALL | 24 <1-48> | SYS | Sets the time interval to recover from the Emergency Mode to the Normal Mode. (Unit: Hour) | 1 |
| 711 | Maintenance | Short time interval setting of Emergency Mode | | ALL | 60 <30-360> | SYS | Unit: Minute | 1 |
| 715 | Maintenance | Remote-controlled service periodical polling timing (Hour/Hour/Minute/Minute) | | ALL | 1230 | SYS | 0 (0:00) to 2359 (23:59) | 1 |
| 716 | Maintenance | Remote-controlled service Writing data of self-diagnostic code | | ALL | 0 <0-1> | SYS | 0: Prohibited 1: Accepted | 1 |
| 717 | Maintenance | Remote-controlled service response waiting time (Timeout) | | ALL | 3 <1-30> | SYS | Unit: Minute | 1 |
| 718 | Maintenance | Remote-controlled service initial registration | | ALL | 0 <0-2> | SYS | 0: OFF 1: Start 2: Only certification is scanned | 1 |
| 719 | Maintenance | Remote-controlled service tentative password | | ALL | - | SYS | Maximum 10 letters | 11 |
| 720 | Maintenance | Status of remote-controlled service initial registration (Display only) | | ALL | 0 <0-1> | SYS | 0: Not registered 1: Registered | 2 |
| 721 | Maintenance | Service center call function | | ALL | 2 <0-2> | SYS | 0: OFF 1: Notifies all service calls 2: Notifies all but paper jams | 1 |
| 723 | Maintenance | Service center call HTTP server URL setting | | ALL | - | SYS | Maximum 256 letters | 11 |
| 726 | Maintenance | HTTP proxy setting | | ALL | 1 <0-1> | SYS | 0: Valid 1: Invalid | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------------|---|----------|----------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 727 | Maintenance | HTTP proxy IP address setting | ALL | - | SYS | 000.000.000.000 - 255.255.255.255 (Default value 000.000.000.000) | 11 |
| 728 | Maintenance | HTTP proxy port number setting | ALL | 0 <0-65535> | SYS | | 1 |
| 729 | Maintenance | HTTP proxy ID setting | ALL | - | SYS | Maximum 30 letters | 11 |
| 730 | Maintenance | HTTP proxy password setting | ALL | - | SYS | Maximum 30 letters | 11 |
| 731 | Maintenance | HTTP proxy panel display | ALL | 1 <0-1> | SYS | 0: Valid 1: Invalid | 1 |
| 732 | Maintenance (Remote) | Automatic ordering function of supplies | ALL | 3 <0-3> | SYS | 0: Ordered by FAX 1: Ordered by E-mail 2: Ordered by HTTP 3: OFF | 1 |
| 733 | Maintenance (Remote) | Automatic ordering function of supplies FAX number | ALL | - | SYS | Maximum 32 digits Enter hyphen with the [Monitor/Pause] button | 11 |
| 734 | Maintenance (Remote) | Automatic ordering function of supplies E-mail address | ALL | - | SYS | Maximum 192 letters List: 256 digits | 11 |
| 738 | Maintenance (Remote) | Automatic ordering function of supplies User's name | ALL | | SYS | Maximum 50 letters | 11 |
| 739 | Maintenance (Remote) | Automatic ordering function of supplies User's telephone number | ALL | | SYS | Maximum 32 digits Enter hyphen with the [Monitor/Pause] button | 11 |
| 740 | Maintenance (Remote) | Automatic ordering function of supplies User's E-mail address | ALL | | SYS | Maximum 192 letters List: 256 digits | 11 |
| 741 | Maintenance (Remote) | Automatic ordering function of supplies User's address | ALL | | SYS | Maximum 100 letters | 11 |
| 742 | Maintenance (Remote) | Automatic ordering function of supplies Service number | ALL | | SYS | Maximum 5 digits | 11 |
| 743 | Maintenance (Remote) | Automatic ordering function of supplies Service technician's name | ALL | | SYS | Maximum 50 letters | 11 |
| 744 | Maintenance (Remote) | Automatic ordering function of supplies Service technician's telephone number | ALL | | SYS | Maximum 32 digits Enter hyphen with the [Monitor/Pause] button | 11 |
| 745 | Maintenance (Remote) | Automatic ordering function of supplies Service technician's E-mail address | ALL | | SYS | Maximum 192 letters List: 256 digits | 11 |
| 746 | Maintenance (Remote) | Automatic ordering function of supplies Supplier's name | ALL | | SYS | Maximum 50 letters | 11 |
| 747 | Maintenance (Remote) | Automatic ordering function of supplies Supplier's address | ALL | | SYS | Maximum 100 letters | 11 |

| Setting mode (08) | | | | | | | |
|-------------------|-------------------------|---|----------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 748 | Maintenance (Remote) | Automatic ordering function of supplies Notes | ALL | | SYS | Maximum 128 letters | 11 |
| 749 | Maintenance (Remote) | Information about supplies Part number of toner cartridge C | ALL | | SYS | Maximum 20 digits | 11 |
| 750 | Maintenance (Remote) | Information about supplies Order quantity of toner cartridge C | ALL | 1 <1-99> | SYS | | 1 |
| 751 | Maintenance (Remote) | Information about supplies Condition number of toner cartridge C | ALL | 1 <1-99> | SYS | | 1 |
| 752 | Maintenance (Remote) | Information about supplies Part number of toner cartridge M | ALL | | SYS | Maximum 20 digits | 11 |
| 753 | Maintenance (Remote) | Information about supplies Order quantity of toner cartridge M | ALL | 1 <1-99> | SYS | | 1 |
| 754 | Maintenance (Remote) | Information about supplies Condition number of toner cartridge M | ALL | 1 <1-99> | SYS | | 1 |
| 755 | Maintenance (Remote) | Information about supplies Part number of toner cartridge Y | ALL | - | SYS | Maximum 20 digits | 11 |
| 756 | Maintenance (Remote) | Information about supplies Order quantity of toner cartridge Y | ALL | 1 <1-99> | SYS | | 1 |
| 757 | Maintenance (Remote) | Information about supplies Condition number of toner cartridge Y | ALL | 1 <1-99> | SYS | | 1 |
| 758 | Maintenance (Remote) | Information about supplies Part number of toner cartridge K | ALL | - | SYS | Maximum 20 digits | 11 |
| 759 | Maintenance (Remote) | Information about supplies Order quantity of toner cartridge K | ALL | 1 <1-99> | SYS | | 1 |
| 760 | Maintenance (Remote) | Information about supplies Condition number of toner cartridge K | ALL | 1 <1-99> | SYS | | 1 |
| 761 | Maintenance (Remote) | Information about supplies Part number of toner bag | ALL | - | SYS | Maximum 20 digits | 11 |
| 762 | Maintenance (Remote) | Information about supplies Order quantity of toner bag | ALL | 1 <1-99> | SYS | | 1 |
| 763 | Maintenance (Remote) | Information about supplies Condition number of toner bag | ALL | 1 <1-99> | SYS | | 1 |
| 764 | Maintenance (Remote) | Automatic ordering supplies Result table printout | ALL | 1 <0-2> | SYS | 0: OFF 1: Always 2: ON Error | 1 |
| 765 | Maintenance (Remote) | Automatic ordering supplies Display | ALL | 2 <0-2> | SYS | 0: Valid (FAX/Internet FAX) 1: Valid (FAX/Internet FAX/ HTTP) 2: Invalid | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------------|---|----------|----------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 767 | Maintenance (Remote) | Service Notification setting | ALL | 0 <0-2> | SYS | Enables to set up to 3 E-mail addresses to be sent. (08-768, 777, 778) 0: Invalid 1: Valid (E-mail) 2: Valid (FAX) | 1 |
| 768 | Maintenance (Remote) | Destination E-mail address 1 | ALL | - | SYS | Maximum 192 letters | 11 |
| 769 | Maintenance (Remote) | Total counter information transmission setting | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 770 | Maintenance (Remote) | Total counter transmission date setting | ALL | 1 <1-31> | SYS | 1 to 31 | 1 |
| 771 | Maintenance (Remote) | PM counter notification setting | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 772 | Maintenance | Dealer's name | ALL | - | SYS | Maximum 100 letters Needed at initial registration | 11 |
| 773 | Maintenance | Login name | ALL | - | SYS | Maximum 20 letters Needed at initial registration | 11 |
| 774 | Maintenance (Remote) | Display setting of [Service Notification] button | ALL | 0 <0-1> | SYS | 0: Not displayed 1: Displayed | 1 |
| 775 | Maintenance (Remote) | Sending error contents of equipment | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 776 | Maintenance (Remote) | Setting total counter transmission interval (Hour/Hour/Minute/Minute) | ALL | - | SYS | | 1 |
| 777 | Maintenance (Remote) | Destination E-mail address 2 | ALL | - | SYS | Maximum 192 letters | 11 |
| 778 | Maintenance (Remote) | Destination E-mail address 3 | ALL | - | SYS | Maximum 192 letters | 11 |
| 779 | Maintenance (Remote) | Notification format selection | ALL | 0 <0-1> | SYS | 0: Text 1: Text + XML data | 1 |
| 780 | Maintenance | Remote-controlled service polling day selection Day-1 | ALL | 0 <0-31> | SYS | 0: OFF 1 to 31: 1st to 31st of a month | 1 |
| 781 | Maintenance | Remote-controlled service polling day selection Day-2 | ALL | 0 <0-31> | SYS | 0: OFF 1 to 31: 1st to 31st of a month | 1 |
| 782 | Maintenance | Remote-controlled service polling day selection Day-3 | ALL | 0 <0-31> | SYS | 0: OFF 1 to 31: 1st to 31st of a month | 1 |

| Setting mode (08) | | | | | | | | |
|-------------------|------------------|--|----------|---|------------|---|-----------------|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 783 | Maintenance | Remote-controlled service polling day selection Day-4 | ALL | 0 <0-31> | SYS | 0: OFF 1 to 31: 1st to 31st of a month | 1 | |
| 784 | Maintenance | Remote-controlled service polling day selection Sunday | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 785 | Maintenance | Remote-controlled service polling day selection Monday | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 786 | Maintenance | Remote-controlled service polling day selection Tuesday | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 787 | Maintenance | Remote-controlled service polling day selection Wednesday | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 788 | Maintenance | Remote-controlled service polling day selection Thursday | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 789 | Maintenance | Remote-controlled service polling day selection Friday | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 790 | Maintenance | Remote-controlled service polling day selection Saturday | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 791 | Maintenance | Information of supplies setting of toner cartridge C | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 792 | Maintenance | Information of supplies setting of toner cartridge M | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 793 | Maintenance | Information of supplies setting of toner cartridge Y | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 794 | Maintenance | Information of supplies setting of toner cartridge K | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 795 | Maintenance | Information of supplies setting of toner bag | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 796 | Maintenance | Remote-controlled service lengthened interval polling (End of month) | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 | |
| 797 | Maintenance | Firmware download | ALL | 0 <0-1> | SYS | 0: Accepted 1: Prohibited | 1 | |
| 815-0 | Image processing | Detection of the status color toner is nearly empty | Y | ALL (color) | 1 <0-1> | M | 0: ON 1: OFF | 4 |
| 815-1 | | | M | ALL (color) | 1 <0-1> | M | | 4 |
| 815-2 | | | C | ALL (color) | 1 <0-1> | M | | 4 |
| 816 | Transfer | 1st transfer roller bias resistance detection control | ALL | 1 <0-1> | M | 0: Disabled 1: Enabled | 1 | |
| 817 | Transfer | 2nd transfer roller bias temperature detection control | ALL | 1 <0-1> | M | 0: Disabled 1: Enabled | 1 | |
| 818 | Transfer | Temperature correction factor table setting | ALL | JPN: 1 UC: 0 EUR: 0 Others: 1 <0-1> | M | 0: No Damp Heater 1: Damp Heater installed | 1 | |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|---|-------------|---|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 819-0 | Development | Color auto-toner sensor output setting for initial developer material | Y | ALL (color) | 256 <0-1023> | M | Sets the target output value of color auto-toner sensor to the sleeve in the auto-toner control. (This is set when performing the automatic adjustment of auto-toner sensor.) | 4 |
| 819-1 | | | M | ALL (color) | 256 <0-1023> | M | | 4 |
| 819-2 | | | C | ALL (color) | 256 <0-1023> | M | | 4 |
| 820-0 | Development | Color auto-toner sensor output display for developer material | Y | ALL (color) | - <0-1023> | M | Displays the output value of the color auto-toner sensor to the sleeve in color printing. | 4 |
| 820-1 | | | M | ALL (color) | - <0-1023> | M | | 4 |
| 820-2 | | | C | ALL (color) | - <0-1023> | M | | 4 |
| 821 | Development | ON/OFF of the mode for developer material stabilization | | ALL (color) | 0 <0-1> | M | Sets whether or not performing an aging to stabilize the status of developer material when the toner density is uneven or the toner charging amount is lowered. 0: ON 1: OFF | 1 |
| 822-0 | Development | Number of times the mode for developer material stabilization is performed | Y | ALL (color) | 0 <0-255> | M | Displays the number of times the developer material stabilization is performed. | 4 |
| 822-1 | | | M | ALL (color) | 0 <0-255> | M | | 4 |
| 822-2 | | | C | ALL (color) | 0 <0-255> | M | | 4 |
| 823-0 | Development | Color auto-toner sensor/light amount correction voltage abnormal detection | Y | ALL (color) | 0 <0-1> | M | Displays "1" when the abnormal output voltage is detected for the color auto-toner sensor light amount correction. ([CF40] error) 0: Normal 1: Abnormality detected | 4 |
| 823-1 | | | M | ALL (color) | 0 <0-1> | M | | 4 |
| 823-2 | | | C | ALL (color) | 0 <0-1> | M | | 4 |
| 824-0 | Development | Color auto-toner sensor/toner density detection voltage abnormal detection | Y | ALL (color) | 0 <0-1> | M | Displays "1" when the abnormal toner density detection voltage is detected. ([CF20] error) 0: Normal 1: Abnormality detected | 4 |
| 824-1 | | | M | ALL (color) | 0 <0-1> | M | | 4 |
| 824-2 | | | C | ALL (color) | 0 <0-1> | M | | 4 |
| 849 | Fuser | Fusing control switching for TWD and SAD models | | ALL | Other than TWD and SAD: 0 TWD and SAD: 1 <0-1> | M | | 1 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|-------------|-------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 858-0 | Development | Color toner forced supply level display | Y | ALL (color) | 0 <0-1> | M | Becomes "1" when the toner density decreases and it is judged forced toner supply is needed. 0: Normal level 1: Forced supply level | 14 |
| 858-1 | | | M | ALL (color) | 0 <0-1> | M | | 14 |
| 858-2 | | | C | ALL (color) | 0 <0-1> | M | | 14 |
| 859-0 | Development | Toner empty detection | Y | ALL (color) | 0 <0-1> | M | Becomes "1" when detecting the toner empty. 0: Normal 1: Empty detected | 14 |
| 859-1 | | | M | ALL (color) | 0 <0-1> | M | | 14 |
| 859-2 | | | C | ALL (color) | 0 <0-1> | M | | 14 |
| 860-0 | Development | Color auto-toner sensor/ proper range setting of OFF level voltage | Upper limit | ALL (color) | 20 <0-1023> | M | Sets the range for judging whether the sensor output value when the sensor light source is OFF is correct or not. | 4 |
| 860-1 | | | Lower limit | ALL (color) | 0 <0-1023> | M | | 4 |
| 861-0 | Development | Color auto-toner sensor/ proper range setting of standard light amount voltage | Upper limit | ALL (color) | 205 <0-255> | M | Sets the range for judging whether the adjustment result of sensor light amount is correct or not. | 4 |
| 861-1 | | | Lower limit | ALL (color) | 40 <0-255> | M | | 4 |
| 862-0 | Development | Color auto-toner sensor/ proper range setting of reference plate output | Upper limit | ALL (color) | 950 <0-1023> | M | Sets the range for judging whether the sensor output value for the reference plate is correct or not. | 4 |
| 862-1 | | | Lower limit | ALL (color) | 205 <0-1023> | M | | 4 |
| 863-0 | Development | Color auto-toner sensor/ proper range setting of developer output | Upper limit | ALL (color) | 450 <0-1023> | M | Sets the range for judging whether the sensor output value for the sleeve is correct or not. | 4 |
| 863-1 | | | Lower limit | ALL (color) | 155 <0-1023> | M | | 4 |
| 864 | Development | Color auto-toner sensor/ sensor OFF output value display at power ON | | ALL (color) | - <0-1023> | M | Displays the sensor output value when the sensor light source is OFF at power ON. | 2 |
| 865 | Development | Color auto-toner sensor/ reference plate output value display at power ON | | ALL (color) | - <0-1023> | M | Displays the sensor output value with the standard light amount for the reference plate at power ON. | 2 |
| 866-0 | Development | Color auto-toner sensor/ abnormal detection potential difference setting of reference plate output | Upper limit | ALL (color) | 820 <0-1023> | M | Sets the range for judging whether the difference between the sensor output when the sensor light source is OFF and the sensor output for the reference plate is correct or not. | 4 |
| 866-1 | Development | | Lower limit | ALL (color) | 205 <0-1023> | M | | 4 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|-------------|----------------------------|--------------|--|---|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 867 | Development | Color auto-toner control environment and life light amount correction setting | ALL (color) | 0 <0-1> | M | Sets whether the sensor light amount is corrected or not depending on the environment and life. 0: Correction 1: No correction | 1 | |
| 868 | Development | Color auto-toner adjustment finishing range setting | ALL (color) | 4 <0-255> | M | Sets the difference from the target value for judging whether the color auto-toner adjustment finishes correctly or not. | 1 | |
| 869 | Development | Color auto-toner control environment and life light amount correction/correction finishing range setting | ALL (color) | 5 <0-255> | M | Sets the difference from the target value for judging whether the light amount correction finishes correctly or not. | 1 | |
| 870 | Development | Color auto-toner sensor/setting of number of times of error detection at light amount correction | ALL (color) | 3 <0-255> | M | Sets the number of times of continuous error detection before the light amount correction abnormality is displayed. | 1 | |
| 871 | Development | Color auto-toner control environment and life light amount correction/display of number of times of reference plate detection error | ALL (color) | 0 <0-255> | M | Displays the number of times of the reference plate detection error for the environment and life light amount correction. | 2 | |
| 872 | Development | Color auto-toner control environment and life light amount correction/display of number of times of light amount control voltage adjustment error | ALL (color) | 0 <0-255> | M | Displays the number of times of the light amount control voltage adjustment error for the environment and life light amount correction. | 2 | |
| 873-0 | Development | Color auto-toner control/developer initial output setting | Y | ALL (color) | 256 <0-1023> | M | Sets the initial developer output target value. | 4 |
| 873-1 | Development | | M | ALL (color) | 256 <0-1023> | M | | 4 |
| 873-2 | Development | | C | ALL (color) | 256 <0-1023> | M | | 4 |
| 874 | Development | Color developer life correction | ALL (color) | 0 <0-1> | M | Sets whether the toner density detection voltage correction is performed or not depending on the developer life in the color auto-toner control. 0: Corrected 1: Not corrected | 1 | |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-------------------|----------|---|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 875-0 | Development | Color developer life correction value (segment 0) | Y | ALL (color) | 0 <-512-511> | M | Sets the correction amount of the toner density detection voltage depending on the developer life. In this code, the life count within 0-2000 is set as the correction amount. | 4 |
| 875-1 | | | M | ALL (color) | 0 <-512-511> | M | | 4 |
| 875-2 | | | C | ALL (color) | 0 <-512-511> | M | | 4 |
| 876-0 | Development | Color developer life correction value (segment 1) | Y | ALL (color) | -4 <-512-511> | M | Sets the correction amount of the toner density detection voltage depending on the developer life. In this code, the life count within 2001-5000 is set as the correction amount. | 4 |
| 876-1 | | | M | ALL (color) | -2 <-512-511> | M | | 4 |
| 876-2 | | | C | ALL (color) | -2 <-512-511> | M | | 4 |
| 877-0 | Development | Color developer life correction value (segment 2) | Y | ALL (color) | -6 <-512-511> | M | Sets the correction amount of the toner density detection voltage depending on the developer life. In this code, the life count within 5001-10000 is set as the correction amount. | 4 |
| 877-1 | | | M | ALL (color) | -3 <-512-511> | M | | 4 |
| 877-2 | | | C | ALL (color) | -3 <-512-511> | M | | 4 |
| 878-0 | Development | Color developer life correction value (segment 3) | Y | ALL (color) | -8 <-512-511> | M | Sets the correction amount of the toner density detection voltage depending on the developer life. In this code, the life count within 10001-20000 is set as the correction amount. | 4 |
| 878-1 | | | M | ALL (color) | -4 <-512-511> | M | | 4 |
| 878-2 | | | C | ALL (color) | -4 <-512-511> | M | | 4 |
| 879-0 | Development | Color developer life correction value (segment 4) | Y | ALL (color) | -10 <-512-511> | M | Sets the correction amount of the toner density detection voltage depending on the developer life. In this code, the life count within 20001-30000 is set as the correction amount. | 4 |
| 879-1 | | | M | ALL (color) | -5 <-512-511> | M | | 4 |
| 879-2 | | | C | ALL (color) | -5 <-512-511> | M | | 4 |
| 880-0 | Development | Color developer life correction value (segment 5) | Y | ALL (color) | -12 <-512-511> | M | Sets the correction amount of the toner density detection voltage depending on the developer life. In this code, the life count within 30001-37500 is set as the correction amount. | 4 |
| 880-1 | | | M | ALL (color) | -6 <-512-511> | M | | 4 |
| 880-2 | | | C | ALL (color) | -6 <-512-511> | M | | 4 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|---|-------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 881-0 | Development | Color developer life correction value (segment 6) | Y | ALL (color) | -12 <-512-511> | M | Sets the correction amount of the toner density detection voltage depending on the developer life. In this code, the life count 37501 or more is set as the correction amount. | 4 |
| 881-1 | | | M | ALL (color) | -6 <-512-511> | M | | 4 |
| 881-2 | | | C | ALL (color) | -6 <-512-511> | M | | 4 |
| 900 | Version | System firmware ROM version | | ALL | - | - | JPN: T410SY0JXXX UC: T410SY0UXXX EUR: T410SY0EXXX Others: T410SY0XXXX | 2 |
| 903 | Version | Engine ROM version | | ALL | - | - | 410M-XXX | 2 |
| 905 | Version | Scanner ROM version | | ALL | - | - | 410S-XXX | 2 |
| 907 | Version | RADF ROM version | | ALL | - | - | DF-XXXX | 2 |
| 908 | Version | Finisher ROM version | | ALL | - | - | SDL-XX FIN-XX | 2 |
| 915 | Version | FAX board ROM version | | FAX | - | - | F562-XXX | 2 |
| 920 | Version | FROM basic section software version | | ALL | - | - | VX.XX/X.XX | 2 |
| 921 | Version | FROM internal program | | ALL | - | - | VXXX.XXX X | 2 |
| 922 | Version | UI data fixed section version | | ALL | - | - | VXXX.XXX X | 2 |
| 923 | Version | UI data common section version | | ALL | - | - | VXXX.XXX X | 2 |
| 924 | Version | Version of UI data language 1 in HDD | | ALL | - | - | VXXX.XXX X | 2 |
| 925 | Version | Version of UI data language 2 in HDD | | ALL | - | - | VXXX.XXX X | 2 |
| 926 | Version | Version of UI data language 3 in HDD | | ALL | - | - | VXXX.XXX X | 2 |
| 927 | Version | Version of UI data language 4 in HDD | | ALL | - | - | VXXX.XXX X | 2 |
| 928 | Version | Version of UI data language 5 in HDD | | ALL | - | - | VXXX.XXX X | 2 |
| 929 | Version | Version of UI data language 6 in HDD | | ALL | - | - | VXXX.XXX X | 2 |
| 930 | Version | Version of UI data in FROM displayed at power-ON | | ALL | - | - | VXXX.XXX X | 2 |
| 931 | Version | Version of UI data language 7 in HDD | | ALL | - | - | VXXX.XXX X | 2 |
| 933 | Version | Web data whole version | | ALL | - | - | VXXX.XXX X | 2 |
| 934 | Version | Web UI data in HDD Version: Language 1 | | ALL | - | - | VXXX.XXX X | 2 |
| 935 | Version | Web UI data in HDD Version: Language 2 | | ALL | - | - | VXXX.XXX X | 2 |
| 936 | Version | Web UI data in HDD Version: Language 3 | | ALL | - | - | VXXX.XXX X | 2 |
| 937 | Version | Web UI data in HDD Version: Language 4 | | ALL | - | - | VXXX.XXX X | 2 |
| 938 | Version | Web UI data in HDD Version: Language 5 | | ALL | - | - | VXXX.XXX X | 2 |
| 939 | Version | Web UI data in HDD Version: Language 6 | | ALL | - | - | VXXX.XXX X | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|-------------------|---|----------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 944 | Version | HD version | ALL | - | - | JPN: T410HD0JXXX UC: T410HD0UXXX EUR: T410HD0EXXX Others: T410HD0XXXX | 2 |
| 945 | Network | Two-way setting of Raw-Port 9100 | ALL | 2 <1-2> | UTY | 1: Valid 2: Invalid | 12 |
| 947 | General | Initialization after software version upgrade | ALL | - | - | Perform this code when the software in this equipment has been upgraded. | 3 |
| 949 | General | Automatic interruption page setting during black printing | ALL | 0 <0-100> | SYS | Sets the number of pages to interrupt the printing automatically. 0-100: 0 to 100 pages | 1 |
| 950 | Electronic filing | Start-up method of Electronic Filing | ALL | 0 <0-2> | SYS | Sets the start-up method of the Electronic Filing. 0: Standard 1: Forced start-up (Not recovered) 2: Forced start-up (Recovered) | 1 |
| 951 | User interface | Image setting for Electronic Filing printing (Only for color image) | ALL | 0 <0-3> | SYS | 0: General 1: Photograph 2: Presentation 3: Line art | 1 |
| 953 | User interface | Access code entry for Electronic Filing printing | ALL | 0 <0-1> | SYS | 0: Renewed automatically 1: Enter every time | 1 |
| 954 | User interface | Clearing timing for files and Electronic Filing Agent | ALL | 1 <0-1> | SYS | 0: Immediately after the completion of scanning 1: Cleared by Auto Clear | 1 |
| 969 | User interface | Error sound | ALL | 1 <0-1> | SYS | 0: OFF 1: ON | 1 |
| 970 | User interface | Sound setting when switching to Energy Saving Mode | ALL | 1 <0-1> | SYS | 0: OFF 1: ON | 1 |
| 973 | Network | PCL line feed code setting | PRT | 0 <0-3> | SYS | Sets the PCL line feed code. 0: Automatic setting 1: CR=CR, LF=LF 2: CR=CR+LF, LF=LF 3: CR=CR, LF=CR+LF | 1 |
| 975 | General | Job handling when printing is short paid with coin controller | ALL | 1 <0-1> | SYS | Sets whether pause or stop the printing job when it is short paid using a coin controller. 0: Pause the job 1: Stop the job | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------|----------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 976 | Scanning | Equipment name and user name setting to a folder when saving files | ALL | 0 <0-2> | SYS | Sets whether or not adding the equipment name and user name to the folder when saving files. 0: Not add 1: Add the equipment name 2: Add the user name | 1 |
| 978 | Network | Raw printing job (Paper feeding drawer) | PRT | 0 <0-5> | SYS | 0: AUTO 1: Upper drawer 2: Lower drawer 3: PFP upper drawer 4: PFP lower drawer 5: LCF | 1 |
| 979 | Network | Raw printing job (PCL symbol set) | PRT | 0 <0-39> | SYS | 0: Roman-8 1: ISO 8859/1 Latin 1 2: ISO 8859/2 Latin 2 3: ISO 8859/9 Latin 5 4: PC-8, Code Page 437 5: PC-8 D/N, Danish/Norwegian 6: PC-850, Multilingual 7: PC-852, Latin2 8: PC-8 Turkish 9: Windows 3.1 Latin 1 10: Windows 3.1 Latin 2 11: Windows 3.1 Latin 5 12: DeskTop 13: PS Text 14: Ventura International 15: Ventura US 16: Microsoft Publishing 17: Math-8 18: PS Math 19: Ventura Math 20: Pi Font 21: Legal 22: ISO 4: United Kingdom 23: ISO 6: ASCII 24: ISO 11 25: ISO 15: Italian 26: ISO 17 27: ISO 21: German 28: ISO 60: Danish/Norwegian 29: ISO 69: French 30: Windows 3.0 Latin 1 31: MC Text 32: PC Cyrillic 33: ITC Zapf Dingbats 34: ISO 8859/10 Latin 6 35: PC-775 36: PC-1004 37: Symbol 38: Windows Baltic 39: Wingdings | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 986 | General | Copy function setting | PPC | 0 <0-1> | SYS | Sets the copy function to be invalid. 0: Valid 1: Invalid | 1 |
| 988 | Paper feeding | Setting of paper size switching to 13" LG | ALL | 0 <0-2> | SYS | 0: Not switched 1: LG→13"LG 2: FOLIO→13"LG | 1 |
| 995 | Maintenance | Equipment number (serial number) display | ALL | 0 <10 digits> | SYS | This code can be also keyed in from the adjustment mode (05-976). 10 digits | 11 |
| 999 | Maintenance | FSMS total counter | ALL | 0 <8 digits> | SYS | Refer to values of total counter. | 1 |
| 1002 | Network | Selection of NIC board status information | ALL | 1 <1-2> | NIC | 1: Not printed out when the copier is restarted 2: Printed out when the copier is restarted | 12 |
| 1003 | Network | Communication speed and settings of Ethernet | ALL | 1 <1-5> | NIC | 1: Auto 2: 10MBPS Half Duplex 3: 10MBPS Full Duplex 4: 100MBPS Half Duplex 5: 100MBPS Full Duplex | 12 |
| 1006 | Network | Address Mode | ALL | 2 <1-3> | NIC | 1: Fixed IP address 2: Dynamic IP address 3: Dynamic IP address without AutoIP | 12 |
| 1007 | Network | Domain name | ALL | - | NIC | Maximum 96 letters | 12 |
| 1008 | Network | IP address | ALL | - | NIC | 000.000.000.000-255.255.255.255 (Default value 000.000.000.000) | 12 |
| 1009 | Network | Subnet mask | ALL | - | NIC | 000.000.000.000-255.255.255.255 (Default value 000.000.000.000) | 12 |
| 1010 | Network | Gateway | ALL | - | NIC | 000.000.000.000-255.255.255.255 (Default value 000.000.000.000) | 12 |
| 1011 | Network | Availability of IPX | ALL | 1 <1-2> | NIC | 1: Available 2: Not available | 12 |
| 1012 | Network | Network frame type | ALL | 1 <1-5> | NIC | 1: Automatic 2: IEEE802.3 3: Ethernet II 4: IEEE802.3 SNAP 5: IEEE802.2 | 12 |
| 1014 | Network | Availability of AppleTalk | ALL | 1 <1-2> | NIC | 1: Available 2: Not available | 12 |
| 1015 | Network | Zone setting of AppleTalk | ALL | * | NIC | Maximum 32 letters *: Wildcard character | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1016 | Network | Availability of LDAP | ALL | 1 <1-2> | NIC | 1: Available 2: Not available | 12 |
| 1017 | Network | Availability of DNS | ALL | 1 <1-2> | NIC | 1: Available 2: Not available | 12 |
| 1018 | Network | IP address to DNS server (Primary) | ALL | - | NIC | 000.000.000.000-255.255.255.255 (Default value 000.000.000.000) | 12 |
| 1019 | Network | IP address to DNS server (Secondary) | ALL | - | NIC | 000.000.000.000-255.255.255.255 (Default value 000.000.000.000) | 12 |
| 1020 | Network | DDNS Desired level | ALL | 1 <1-5> | NIC | 1: Invalid 2: Via DHCP 3: Insecure DDNS 4: Secure DDNS 5: Multi-secure DDNS | 12 |
| 1022 | Network | From Name Creation setting in SMTP authentication | ALL | 0 <0-1> | SYS | 0: Not edited 1: Account name of From Address +Device name | 1 |
| 1023 | Network | NetBios name | ALL | MFP_serial | UTY | Maximum 15 letters The network-related serial number of the equipment appears at "serial" | 12 |
| 1024 | Network | Name of WINS server or IP address (Primary) | ALL | - | UTY | 000.000.000.000-255.255.255.255 (Default value 000.000.000.000) | 12 |
| 1025 | Network | Name of WINS server or IP address (Secondary) | ALL | - | UTY | 000.000.000.000-255.255.255.255 (Default value 000.000.000.000) | 12 |
| 1026 | Network | Availability of Bindery | ALL | 1 <1-2> | NIC | 1: Available 2: Not available | 12 |
| 1027 | Network | Availability of NDS | ALL | 1 <1-2> | NIC | 1: Available 2: Not available | 12 |
| 1028 | Network | Directory service context | ALL | - | NIC | Maximum 127 letters | 12 |
| 1029 | Network | Directory service tree | ALL | - | NIC | Maximum 47 letters | 12 |
| 1030 | Network | Availability of HTTP server | ALL | 1 <1-2> | NIC | 1: Available 2: Not available | 12 |
| 1031 | Network | Port number to NIC HTTP server | ALL | 80 <1-65535> | NIC | | 12 |
| 1032 | Network | Port number to system HTTP server | ALL | 8080 <1-65535> | NIC | | 12 |
| 1037 | Network | Availability of SMTP client | ALL | 1 <1-2> | NIC | 1: Available 2: Not available | 12 |
| 1038 | Network | FQDN or IP address to SMTP server | ALL | - | NIC | Maximum 128 Bytes | 12 |
| 1039 | Network | TCP port number of SMTP client | ALL | 25 <1-65535> | NIC | | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|------------------------------------|----------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1040 | Network | Availability of SMTP server | ALL | 1 <1-2> | UTY | 1: Available 2: Not available | 12 |
| 1041 | Network | TCP port number of SMTP server | ALL | 25 <1-65535> | UTY | | 12 |
| 1042 | Network | E-mail box name to SMTP server | ALL | - | UTY | Maximum 192 letters | 12 |
| 1043 | Network | Availability of Offramp | ALL | 2 <1-2> | UTY | 1: Available 2: Not available | 12 |
| 1044 | Network | Offramp security | ALL | 1 <1-2> | UTY | 1: Available 2: Not available | 12 |
| 1045 | Network | Printing at Offramp | ALL | 1 <1-2> | UTY | 1: Available 2: Not available | 12 |
| 1046 | Network | Availability of POP3 clients | ALL | 1 <1-2> | NIC | 1: Available 2: Not available | 12 |
| 1047 | Network | FQDN or IP address to POP3 server | ALL | - | NIC | Maximum 128 Bytes | 12 |
| 1048 | Network | Types of POP3 server | ALL | 1 <1-3> | NIC | 1: Automatic 2: POP3 3: APOP | 12 |
| 1049 | Network | Login name to POP3 server | ALL | - | NIC | Maximum 96 letters | 12 |
| 1050 | Network | Login password to POP3 | ALL | - | NIC | Maximum 96 letters | 12 |
| 1051 | Network | E-mail reception interval | ALL | 5 <0-4096> | NIC | Unit: Minute | 12 |
| 1052 | Network | TCP port number of POP3 client | ALL | 110 <1-65535> | NIC | | 12 |
| 1055 | Network | TCP port number of FTP client | ALL | 21 <1-65535> | UTY | | 12 |
| 1059 | Network | Availability of FTP server | ALL | 1 <1-2> | NIC | 1: Available 2: Not available | 12 |
| 1060 | Network | TCP port number of FTP server | ALL | 21 <1-65535> | UTY | | 12 |
| 1063 | Network | MIB function | ALL | 1 <1-2> | NIC | 1: Valid 2: Invalid | 12 |
| 1065 | Network | Setting of read Community | ALL | public | NIC | Maximum 31 letters | 12 |
| 1066 | Network | Setting of read/Write Community | ALL | private | NIC | Maximum 31 letters | 12 |
| 1069 | Network | TRAP destination IP address | ALL | - | UTY | 000.000.000.000- 255.255.255.255 (Default value 000.000.000.000) | 12 |
| 1070 | Network | Community setting of TRAP (via IP) | ALL | public | NIC | Maximum 31 letters | 12 |
| 1073 | Network | Availability of Raw/TCP | ALL | 1 <1-2> | NIC | 1: Valid 2: Invalid | 12 |
| 1074 | Network | TCP port number of Raw | ALL | 9100 <1-65535> | NIC | | 12 |
| 1075 | Network | Availability of LPD client | ALL | 1 <1-2> | NIC | 1: Valid 2: Invalid | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1076 | Network | TCP port number of LPD | ALL | 515 <1-65535> | NIC | | 12 |
| 1077 | Network | LPD queue name | ALL | - | NIC | Maximum 31 letters | 12 |
| 1078 | Network | Availability of IPP | ALL | 1 <1-2> | NIC | 1: Valid 2: Invalid | 12 |
| 1079 | Network | Availability of IPP port number "80" | ALL | 1 <1-2> | NIC | 1: Valid 2: Invalid | 12 |
| 1080 | Network | TCP port number of IPP | ALL | 631 <1-65535> | NIC | | 12 |
| 1081 | Network | IPP printer name | ALL | MFP_ serial | NIC | Maximum 127 letters The network-related serial number of the equipment appears at "serial" | 12 |
| 1082 | Network | IPP printer location | ALL | - | NIC | Maximum 127 letters | 12 |
| 1083 | Network | IPP printer information | ALL | - | NIC | Maximum 127 letters | 12 |
| 1084 | Network | IPP printer information (more) | ALL | - | NIC | Maximum 127 letters | 12 |
| 1085 | Network | Installer of IPP printer driver | ALL | - | NIC | Maximum 127 letters | 12 |
| 1086 | Network | IPP printer "Make and Model" | ALL | - | NIC | Maximum 127 letters | 12 |
| 1087 | Network | IPP printer information (more) MFGR | ALL | - | NIC | Maximum 127 letters | 12 |
| 1088 | Network | IPP message from operator | ALL | - | NIC | Maximum 127 letters | 12 |
| 1089 | Network | Availability of FTP print | ALL | 1 <1-2> | NIC | 1: Available 2: Not available | 12 |
| 1090 | Network | Printer user name of FTP | ALL | print | NIC | Maximum 31 letters | 12 |
| 1091 | Network | Printer user password of FTP | ALL | - | NIC | Maximum 31 letters | 12 |
| 1092 | Network | TCP port number to FTP print server | ALL | 21 <1-65535> | NIC | | 12 |
| 1093 | Network | Login name to Novell print server | ALL | MFP_ serial | NIC | Maximum 47 letters The network-related serial number of the equipment appears at "serial" | 12 |
| 1094 | Network | Login password to Novell print server | ALL | - | NIC | Maximum 31 letters | 12 |
| 1095 | Network | Name of SearchRoot server | ALL | - | NIC | Maximum 31 letters | 12 |
| 1096 | Network | Scan rate setting of print queue | ALL | 5 <1-255> | NIC | Unit: Second | 12 |
| 1097 | Network | Page number limitation for printing text of received Email | ALL | 5 <1-99> | UTY | | 12 |
| 1098 | Network | MDN return mail setting when receiving E-mail | ALL | 2 <1-2> | UTY | 1: Valid 2: Invalid | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1099 | Network | Trap destination of IPX | ALL | - | UTY | 24 letters (Valid from 0 to 9 and from A to F) | 12 |
| 1100 | Network | Method of SMTP server authentication | ALL | 1 <1-6,10> | NIC | 1: Disable 2: Plain 3: Login 4: Cram-MD5 5: Digest MD5 6: Kerberos 10: Auto | 12 |
| 1101 | Network | Login name for SMTP server authentication | ALL | - | NIC | Maximum 64 letters | 12 |
| 1102 | Network | Login password for SMTP server authentication | ALL | - | NIC | Maximum 64 letters | 12 |
| 1103 | Network | Rendezvous setting | ALL | 1 <1-2> | NIC | 1: Valid 2: Invalid | 12 |
| 1104 | Network | Link local host name | ALL | MFP_serial | NIC | Maximum 127 letters The network-related serial number of the equipment appears at "serial" | 12 |
| 1105 | Network | Service name setting | ALL | Refer to contents | NIC | Maximum 63 letters The network-related serial number of the equipment appears at "serial" <Default value> e-STUDIO281C: TOSHIBA e-STUDIO281C_serial e-STUDIO351C: TOSHIBA e-STUDIO351C_serial e-STUDIO451C: TOSHIBA e-STUDIO451C_serial | 12 |
| 1111 | Network | POP Before SMTP setting | ALL | 2 <1-2> | NIC | 1: Valid 2: Invalid | 12 |
| 1112 | Network | Host name | ALL | MFP_serial | NIC | Maximum 63 letters The network-related serial number of the equipment appears at "serial" | 12 |
| 1113 | Network | Windows domain No.1 of user authentication | ALL | - | UTY | Maximum 128 letters | 12 |
| 1114 | Network | Sending mail text of InternetFAX | ALL | 1 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 1117 | Network | SMB time-out period | ALL | 300 <1-9999> | SYS | Unit: Second | 1 |
| 1118 | General | Clearing of TAT partition | ALL | - | SYS | | 3 |
| 1119 | Network | Initialization of NIC information | ALL | - | - | Initializes only the information of the Network setting items. | 3 |
| 1121 | Network | PDC (Primary Domain Controller) name No.1 of authentication | ALL | - | UTY | Maximum 128 letters | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------|----------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1122 | Network | BDC (Backup Domain Controller) name No.1 of authentication | ALL | - | UTY | Maximum 128 letters | 12 |
| 1123 | Network | Windows domain of device authentication | ALL | 4 <3-4> | UTY | 3: ON (Domain selected) 4: OFF (Work group selected) | 12 |
| 1124 | Network | Workgroup name | ALL | work-group | UTY | Maximum 15 letters | 12 |
| 1125 | General | Data writing of address book data import (overwriting method) | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 1126 | Counter | Validity of interrupt copying when external counters are installed | ALL | 0 <0-1> | SYS | 0: Invalid 1: Valid | 1 |
| 1128 | Network | NetwareUserAuthTree Name1 | ALL | - | UTY | Maximum 47 letters | 12 |
| 1129 | Network | NetwareUserAuthContext Name1 | ALL | - | UTY | Maximum 127 letters | 12 |
| 1130 | User interface | Job Build Function | ALL | 1 <0-1> | SYS | Sets the Job Build Function. 0: Invalid 1: Valid | 1 |
| 1131 | User interface | Maximum number of time job build performed | ALL | 1000 <5-1000> | SYS | Sets the maximum number of time a job build has been performed. 5-1000: 5 to 1000 times | 1 |
| 1132 | General | Default screen selection of the User Function menu | ALL | 1 <0-1> | SYS | Selects the default screen when entering the User Function menu by pressing the [USER FUNCTIONS] button. 0: ADDRESS 1: COUNTER | 1 |
| 1134 | Network | NetwareUserAuthTree Name2 | ALL | - | UTY | Maximum 47 letters | 12 |
| 1135 | Paper feeding | Default setting of drawers (Printer/BOX) | ALL | 1 <1-5> | SYS | 1: LCF 2: Upper drawer 3: Lower drawer 4: PFP upper drawer 5: PFP lower drawer | 1 |
| 1136 | Network | Number of lines simultaneously connectable when using SMB | ALL | 13 <8-16> | SYS | | 1 |
| 1137 | Network | Memory partition size when using Samba | ALL | 16 <8-20> | SYS | 8-20 M bytes | 1 |
| 1138 | Network | LDAP search method setting | ALL | 0 <0-3> | SYS | Sets the search method when performing a LDAP search. 0: Partial match 1: Prefix match 2: Suffix match 3: Full match | 1 |
| 1139 | Network | LDAP authentication setting | ALL | 0 <0-1> | SYS | 0: Not authenticated 1: Authenticated | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------------|---|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1140 | User interface | Restriction of the template function with the administrator privilege | ALL | 0 <0-1> | SYS | Selects the restriction of the template function usage setting. 0: No restriction 1: Only available with the administrator privilege. | 1 |
| 1141 | Network | Display of MAC address | ALL | - | SYS | (**.*.*.*.*.*.*.*.) The address is displayed as above (6-byte data is divided by a colon at every 2 bytes). | 2 |
| 1143 | Network | NetwareUserAuthContext Name2 | ALL | - | UTY | Maximum 127 letters | 12 |
| 1144 | Network | NetwareUserAuthTree Name3 | ALL | - | UTY | Maximum 47 letters | 12 |
| 1145 | Maintenance (Remote) | Counter notification Remote FAX setting | ALL | - | SYS | Maximum 32 digits Enter a hyphen with the [MONITOR/PAUSE] button. | 11 |
| 1148 | Network | NetwareUserAuthContext Name3 | ALL | - | UTY | Maximum 127 letters | 12 |
| 1370 | Image processing | Image quality control time accumulating counter | ALL | 0 <8 digits> | M | Counts driving count of the drum (image quality control time). Counts up when drum motor and image quality control are ON. | 1 |
| 1371 | Image processing | Accumulated counter of output pages since the performing of image quality control | ALL | 0 <4 digits> | M | Cleared to "0" by the image quality closed-loop control. Counts up with the number of printing job received after this control. | 2 |
| 1372 | Image processing | Heater and energizing time accumulating counter Display/0 clearing | ALL | 0 <8 digits> | M | Counts up the heater control time accumulated (when power of the copier is ON) but does not count at the Sleep Mode. When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode. | 1 |
| 1378 | Image processing | Fuser roller ready temperature time accumulating counter | ALL | 0 <8 digits> | M | Counts up the heater control time accumulated (on standby). When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode. | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|------------------|---|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1380 | Image processing | Fuser roller printing temperature time accumulating counter | ALL | 0 <8 digits> | M | Counts up the heater control time accumulated (during printing). When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode. | 2 |
| 1382 | Image processing | Fuser roller energy saving temperature time accumulating counter Display/0 clearing | ALL | 0 <8 digits> | M | Counts up the heater control time accumulated (at energy saving mode). When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode. | 2 |
| 1385 | Image processing | Number of output pages (Thick paper 1) | ALL | 0 <8 digits> | M | Counts up when the registration sensor is ON. When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode. | 1 |
| 1386 | Image processing | Number of output pages (Thick paper 2) | ALL | 0 <8 digits> | M | Counts up when the registration sensor is ON. When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode. | 1 |
| 1387 | Image processing | Number of output pages (Thick paper 3) | ALL | 0 <8 digits> | M | Counts up when the registration sensor is ON. When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode. | 1 |
| 1388 | Image processing | Number of output pages (OHP film) | ALL | 0 <8 digits> | M | Counts up when the registration sensor is ON. When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode. | 1 |
| 1389 | Main charger | Main charger wire cleaning counter display/0 clearing | ALL | 0 <5 digits> | M | Does not count up when cleaning is not effective. | 1 |
| 1390 | Paper feeding | Feeding retry counter (upper drawer) | ALL | 0 <8 digits> | M | Counts the number of times of the feeding retry from the upper drawer. | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|------------------|---|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1391 | Paper feeding | Feeding retry counter (lower drawer) | ALL | 0 <8 digits> | M | Counts the number of times of the feeding retry from the lower drawer. | 1 |
| 1392 | Paper feeding | Feeding retry counter (PFP upper drawer) | ALL | 0 <8 digits> | M | Counts the number of times of the feeding retry from the PFP upper drawer. | 1 |
| 1393 | Paper feeding | Feeding retry counter (PFP lower drawer) | ALL | 0 <8 digits> | M | Counts the number of times of the feeding retry from the PFP lower drawer. | 1 |
| 1394 | Paper feeding | Feeding retry counter (bypass feed) | ALL | 0 <8 digits> | M | Counts the number of times of the feeding retry from the bypass tray. | 1 |
| 1395 | Paper feeding | Feeding retry counter (LCF) | ALL | 0 <8 digits> | M | Counts the number of times of the feeding retry from the LCF. | 1 |
| 1396 | Paper feeding | Feeding retry counter upper limit value (upper drawer) | ALL | 10 <8 digits> | M | When the number of feeding retry (08-1390 to 08-1395) exceeds the setting value, the feeding retry will not be performed subsequently. In case "0" is set as a setting value, however, the feeding retry continues regardless of the counter setting value. Refer to (Note 1). | 1 |
| 1397 | Paper feeding | Feeding retry counter upper limit value (lower drawer) | ALL | 10 <8 digits> | M | | 1 |
| 1398 | Paper feeding | Feeding retry counter upper limit value (PFP upper drawer) | ALL | 10 <8 digits> | M | | 1 |
| 1399 | Paper feeding | Feeding retry counter upper limit value (PFP lower drawer) | ALL | 10 <8 digits> | M | | 1 |
| 1400 | Paper feeding | Feeding retry counter upper limit value (bypass feed) | ALL | 10 <8 digits> | M | | 1 |
| 1401 | Paper feeding | Feeding retry counter upper limit value (LCF) | ALL | 10 <8 digits> | M | | 1 |
| 1410 | Counter | Black toner cartridge drive counts/0 clearing | ALL | 0 <8 digits> | M | | |
| 1412 | Counter | Counter for tab paper | ALL | 0 <8 digits> | M | Counts up when the registration sensor is ON. When the counter value of the fuser roller is reset, this counter is reset in sync at the PM support mode. | 1 |
| 1414 | Image processing | Toner cartridge wrong installation detection ON/OFF setting | ALL | 0 <0-1> | M | 0: ON 1: OFF | 1 |
| 1415 | Image processing | Detection/control that the toner cartridge is nearly empty | ALL | 0 <0-2> | M | Sets ON or OFF of the detection/control that the toner cartridge is nearly empty. 0: All colors (Y/M/C/K) OFF 1: Black (K) ON 2: All colors (Y/M/C/K) ON | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|--------------------|--|----------|--|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1416 | Image processing | Threshold for detecting that black toner cartridge is nearly empty | ALL | 322500 <8 digits> | M | | 1 |
| 1422 | Data overwrite kit | HDD data overwriting type setting | ALL | 0 <0-2> | SYS | Select the type of the overwriting level; LOW, MEDIUM, or HIGH for deleting HDD data. (This setting is enabled only when the GP-1060 is installed.) 0: LOW 1: MEDIUM 2: HIGH | 1 |
| 1424 | Data overwrite kit | HDD data clearing type setting (forcible clearing) | ALL | 0 <0-2> | SYS | Select the type of the overwriting level; LOW, MEDIUM, or HIGH for deleting HDD data. (This setting is enabled only when the GP-1060 is installed.) 0: LOW 1: MEDIUM 2: HIGH | 1 |
| 1426 | Data overwrite kit | Forcible HDD data clearing | ALL | - | - | HDD data is cleared in the procedure set in 08-1424. * This setting is enabled only when the GP-1060 is installed. | 3 |
| 1427 | Data overwrite kit | Forcible NVRAM data all clearing | ALL | - | - | When this code is performed, the equipment cannot be started up. * This setting is enabled only when the GP-1060 is installed. | 3 |
| 1428 | Data overwrite kit | Forcible SRAM backup data all clearing | ALL | - | - | When this code is performed, the equipment cannot be started up. * This setting is enabled only when the GP-1060 is installed. | 3 |
| 1429 | User interface | Margin width (Top/Bottom, Left/Right) | ALL | Front: 7/ Back: 7 <2-100/-100-100> | SYS | This setting is not reflected in "Right", even if the value less than 2 is set for "Back". | 10 |
| 1430 | User interface | Margin width (Bookbinding margin) | ALL | 14 <2-30> | SYS | | 1 |
| 1431 | Network | ACC (AT_CASSETTE_CHANGE) for Printer/Box printing | ALL | 1 <0-2> | SYS | 0: ACC prohibited 1: Only in the same paper direction 2: In both same direction and different directions | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1432 | Network | Private-print-only mode | ALL | 0 <0-1> | SYS | 0: Normal 1: Private-print-only mode | 1 |
| 1433 | Network | Disabling e-Filing function | ALL | 0 <0-1> | SYS | 0: Function off (No restriction on data saving and other operations) 1: Function on (Data saving and other operations have some restrictions) | 1 |
| 1435 | Network | "Disable private and proof print save" function | ALL | 0 <0-1> | SYS | 0: Function OFF (no restriction on data saving or other operations) 1: Function ON (Data saving or other operations are restricted) | 1 |
| 1436 | Network | "Disable fax save" function | ALL | 0 <0-1> | SYS | 0: Function OFF (no restriction on data saving or other operations) 1: Function ON (Data saving or other operations are restricted) | 1 |
| 1440 | Network | IP Conflict Detect | ALL | 1 <1-2> | - | OFF/ON 1: Valid 2: Invalid | 12 |
| 1441 | Network | SNTP Enable | ALL | 2 <1-2> | - | OFF/ON 1: Valid 2: Invalid | 12 |
| 1442 | Network | SNTP Polling rate | ALL | 24 <1-168> | - | Data obtaining interval (Unit: Hour) | 12 |
| 1444 | Network | Primary SNTP Address | ALL | - | - | SNTP server IP Address (Primary) | 12 |
| 1445 | Network | Secondary SNTP Address | ALL | - | - | SNTP server IP Address (Secondary) | 12 |
| 1446 | Network | Port number to SNTP | ALL | 123 <1-65535> | - | | 12 |
| 1447 | Network | IPP administrator name | ALL | - | - | This should be an account which can control all IPP jobs. | 12 |
| 1448 | Network | IPP administrator password | ALL | - | - | This should be the password of an account which can control all IPP jobs. | 12 |
| 1449 | Network | IPP authentication method | ALL | 1 <1-4> | - | 1: Disabled 2: Basic 3: Digest 4: Basic Digest | 12 |
| 1450 | Network | User name for IPP authentication | ALL | - | - | This should be the account at the time IPP authentication was performed. | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1451 | Network | Password for IPP authentication | ALL | - | - | This should be the password of the account at the time IPP authentication was performed. | 12 |
| 1464 | Network | Samba server ON/OFF setting | ALL | 1 <1-4> | NIC | 1: Samba enabled 2: Samba disabled 3: Print Share disabled 4: File Share disabled | 12 |
| 1468 | General | User data management limitation setting | ALL (color) | 0 <0-1> | SYS | 0: Disabled 1: Enabled | 1 |
| 1469 | General | User data management limitation Setting by number of printouts | ALL (color) | 0 <7 digits> | SYS | 0-9,999,999: 0-9,999,999 sheets | 1 |
| 1470 | General | Device authentication function setting | ALL | 0 <0-1> | SYS | 0: OFF 1: ON | 1 |
| 1471 | General | User authentication method | ALL | 0 <0-5> | SYS | 0: Local 1: NTLM (NT Domain) 2: LDAP 3: Kerberos (Active Directory) 4: Netware | 1 |
| 1472 | General | User data management automatic registration function setting | ALL | 0 <0-1> | SYS | 0: Disabled 1: Enabled | 1 |
| 1473 | General | User data management limitation setting | ALL (black) | 0 <0-1> | SYS | 0: Disabled 1: Enabled | 1 |
| 1474 | General | User data management limitation Setting by number of printouts | ALL (black) | 0 <7 digits> | SYS | 0-9,999,999: 0-9,999,999 sheets | 1 |
| 1476 | Network | Restriction on Address book operation by administrator | ALL | 0 <0-1> | SYS | Some restrictions can be given on the administrator for operating the Address book. 0: No restriction 1: Can be operated only under the administrator's authorization | 1 |
| 1477 | Network | Restriction on "To" ("cc") address | ALL | 0 <0-3> | SYS | 0: No restriction 1: Can be set from both of the Address book and LDAP server 2: Can be set only from the Address book 3: Can be set only from the LDAP server | 1 |
| 1478 | User interface | Display of paper size setting by installation operation of drawers | ALL | JPN: 0 UC: 1 <0-1> | SYS | 0: Not displayed 1: Displayed | 1 |
| 1479 | User interface | Default setting of sharpness | ALL | 5 <1-9> | SYS | 1: -4 2: -3 3: -2 4: -1 5: 0 6: +1 7: +2 8: +3 9: +4 | 1 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1481 | General | User data management clearing | ALL | - | - | All the user data in the database and backup files can be deleted. | 3 |
| 1482 | General | User data department management | ALL | 0 <0-1> | SYS | 0: Disabled 1: Enabled | 1 |
| 1483 | General | User data recovery | ALL | - | - | The data in the database is overwritten with the data in the backup file. | 3 |
| 1484 | Network | Authentication method of "Scan to Email" | ALL | 0 <0-2> | SYS | 0: Disabled 1: SMTP authentication 2: LDAP authentication | 1 |
| 1485 | Network | Setting whether use of the Internet FAX is permitted at the time of authentication | ALL | 0 <0-1> | SYS | 0: Not permitted 1: Permitted | 1 |
| 1486 | Network | LDAP server setting for user authentication | ALL | 0 <0-4294967295> | SYS | | 2 |
| 1487 | Network | "From" address assignment method at the time of authentication | ALL | 0 <0-2> | SYS | 0: User name + @ + Domain name 1: LDAP searching 2: Use the address registered at "From" field of E-mail setting | 1 |
| 1488 | Network | ID setting of LDAP server for "From" address assignmentPrivate-print-only mode | ALL | 0 <0-4294967295> | SYS | | 2 |
| 1489 | Network | Setting for "From" address edit at "Scan to Email" | ALL | 0 <0-1> | SYS | 0: Not permitted 1: Permitted | 1 |
| 1491 | Network | E-mail domain name | ALL | - | SYS | 96 + 2 (delimiter) character * ASCII sequence only | 11 |
| 1492 | Paper feeding | Detection method of 13" LG for single-size document | ALL | 0 <0-1> | SYS | 0: Disabled 1: Enabled | 1 |
| 1493 | Network | Role Base Access Function | ALL | 0 <0-1> | SYS | 0: Function off (No restriction on data saving and other operations) 1: Function on (Data saving and other operations have some restrictions) | 1 |
| 1494 | General | Limitation check method | ALL | 0 <0-1> | SYS | 0: Checked at every page printed 1: Checked at every job printed | 1 |

| Setting mode (08) | | | | | | | | |
|-------------------|-------------------|--|-------------------------|----------------------------------|-----------------|---|--|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 1495 | Maintenance | Service call checking period setting | ALL | 6 <0-12> | - | 0: No checking period specified (= Calls service technician immediately) 0: 10 minutes 1: 30 minutes 3: 1 hour 4: 6 hours 5: 12 hours 6: 24 hours 7: 48 hours 8: 7 days 9: 1 month 10: 1 year 11: 5 years 12: Not limited (= Calls service technician if such error has occurred in the past even once or more) | 1 | |
| 1496 | General | Operation setting for User authentication/registration | ALL | 1 <0-1> | SYS | 0 : Disables operation setting for User authentication/registration 1 : Enables operation setting for User authentication/registration | 1 | |
| 1497 | Electronic Filing | e-Filing Access Mode (for Client) | ALL | 0 <0-2> | SYS | 0: Mode 1 1: Mode 2 2: Mode 3 | 1 | |
| 1498 | FAX | Inbound FAX function (Forwarding by TSI) | FAX | 1 <0-1> | SYS | 0: OFF (Function disabled) 1: ON (Function enabled) | 1 | |
| 1530-0 | Counter | Number of output pages in black mode | 1-UP / Duplex printing | PPC (black) | 0 <8 digits> | SYS | Counts the number of output pages printed only in the black mode. | 4 |
| 1530-1 | | | 2-UP / Duplex printing | PPC (black) | 0 <8 digits> | SYS | Counts the number of output pages printed in the black mode using [2IN1] or [MAGAZINE SORT]. | 4 |
| 1530-2 | | | 2-UP / Simplex printing | PPC (black) | 0 <8 digits> | SYS | Counts the number of sheets printed in the black mode using [2IN1] or [MAGAZINE SORT]. | 4 |
| 1530-3 | | | 4-UP / Duplex printing | PPC (black) | 0 <8 digits> | SYS | Counts the number of output pages printed in the black mode using [4IN1]. | 4 |
| 1530-4 | | | 4-UP / Simplex printing | PPC (black) | 0 <8 digits> | SYS | Counts the number of sheets printed in the black mode using [4IN1]. | 4 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|-------------------------|----------------------------------|-----------------|----------|---|---|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 1531-0 | Counter | Number of output pages in full color mode | 1-UP / Duplex printing | PPC (color) | 0 <8 digits> | SYS | Counts the number of output pages printed only in the full color mode. | 4 |
| 1531-1 | | | 2-UP / Duplex printing | PPC (color) | 0 <8 digits> | SYS | Counts the number of output pages printed in the full color mode using [2IN1] or [MAGAZINE SORT]. | 4 |
| 1531-2 | | | 2-UP / Simplex printing | PPC (color) | 0 <8 digits> | SYS | Counts the number of sheets printed in the full color mode using [2IN1] or [MAGAZINE SORT]. | 4 |
| 1531-3 | | | 4-UP / Duplex printing | PPC (color) | 0 <8 digits> | SYS | Counts the number of output pages printed in the full color mode using [4IN1]. | 4 |
| 1531-4 | | | 4-UP / Simplex printing | PPC (color) | 0 <8 digits> | SYS | Counts the number of sheets printed in the full color mode using [4IN1]. | 4 |
| 1532-0 | Counter | Number of output pages in twin color mode | 1-UP / Duplex printing | PPC (color) | 0 <8 digits> | SYS | Counts the number of output pages printed only in the twin color mode. | 4 |
| 1532-1 | | | 2-UP / Duplex printing | PPC (color) | 0 <8 digits> | SYS | Counts the number of output pages printed in the twin color mode using [2IN1] or [MAGAZINE SORT]. | 4 |
| 1532-2 | | | 2-UP / Simplex printing | PPC (color) | 0 <8 digits> | SYS | Counts the number of sheets printed in the twin color mode using [2IN1] or [MAGAZINE SORT]. | 4 |
| 1532-3 | | | 4-UP / Duplex printing | PPC (color) | 0 <8 digits> | SYS | Counts the number of output pages printed in the twin color mode using [4IN1]. | 4 |
| 1532-4 | | | 4-UP / Simplex printing | PPC (color) | 0 <8 digits> | SYS | Counts the number of sheets printed in the twin color mode using [4IN1]. | 4 |
| 1533-0 | Counter | Number of output pages of the printer or BOX | 1-UP / Duplex printing | PRT (black) | 0 <8 digits> | SYS | Counts the number of output pages printed in the black mode. | 4 |
| 1533-1 | | | 2-UP / Duplex printing | PRT (black) | 0 <8 digits> | SYS | Counts the number of output pages printed in the black mode using [2IN1] or [MAGAZINE SORT]. * When printing is performed using a Windows driver, the 1-UP image will be output. | 4 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|------------------------|-------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1534-0 | Counter | Number of output pages of the printer or BOX (Full color) | 1-UP / Duplex printing | PRT (color) | 0 <8 digits> | SYS | Counts the number of output pages printed only in the full color mode. | 4 |
| 1534-1 | | | 2-UP / Duplex printing | PRT (color) | 0 <8 digits> | SYS | Counts the number of output pages printed in the full color mode using [2IN1] or [MAGAZINE SORT]. * When printing is performed using a Windows driver, the 1-UP image will be output. | 4 |
| 1535 | Counter | Number of output pages of the FAX printing (1-UP / Duplex printing) | | FAX (black) | 0 <8 digits> | SYS | Counts the number of output pages in the default settings. | 4 |
| 1661 | Wireless LAN | Wireless LAN driver SSID | | ALL | - | - | Maximum 32 letters | 12 |
| 1662 | Wireless LAN | Wireless LAN driver Network type | | ALL | 1 <1-2> | - | 1: Infrared wireless LAN 2: Ad-hoc network | 12 |
| 1663 | Wireless LAN | Wireless LAN driver Security | | ALL | 4 <1-7> | - | 1: 802.1x 2: WPA-PSK 3: WEP 4: NONE 5: WPA 6: WPA2 7: WPA2PSK | 12 |
| 1664 | Wireless LAN | Wireless LAN driver Encryption system | | ALL | 1 <1-3> | - | 1: TKIP 2: AES 3: Dynamic WEP | 12 |
| 1665 | Wireless LAN | Wireless LAN driver Transmission output power | | ALL | 1 <1-5> | - | 1: 100% 2: 50% 3: 25% 4: 12.5% 5: min | 12 |
| 1666 | Wireless LAN | Wireless LAN driver Transmission rate | | ALL | 1 <1-2> | - | 1: Auto 2: Manual | 12 |
| 1667 | Wireless LAN | Wireless LAN driver Transmission rate value | | ALL | 1 <1-12> | - | 1: 1 2: 2 3: 5.5 4: 11 5: 6 6: 9 7: 12 8: 18 9: 24 10: 36 11: 48 12: 54 | 12 |
| 1668 | Wireless LAN | Wireless LAN driver Operation channel | | ALL | 1 <1-2> | - | 1: Auto 2: Manual | 12 |
| 1669 | Wireless LAN | Wireless LAN driver Operation channel value | | ALL | 1 <1-11> | - | | 12 |
| 1670 | Wireless LAN | Wireless LAN driver WEP bit number | | ALL | 1 <1-3> | - | 1: 64 2: 128 3: 152 | 12 |
| 1671 | Wireless LAN | Wireless LAN driver WEP key entry system | | ALL | 2 <1-2> | - | 1: Hex 2: ASCII | 12 |
| 1672 | Wireless LAN | Wireless LAN driver WEP key value | | ALL | - | - | Maximum 32 letters | 12 |
| 1673 | Wireless LAN | Wireless LAN driver WPA-PSK passphrase | | ALL | - | - | Maximum 64 letters | 12 |
| 1674 | Wireless LAN | Wireless LAN driver Sleep mode setting | | ALL | 1 <1-3> | - | 1: Off 2: Max 3: Normal | 12 |
| 1675 | Wireless LAN | Wireless LAN driver Slot-time limitation | | ALL | 1 <1-2> | - | 1: Long 2: Short | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1676 | Wireless LAN | Wireless LAN driver Number of times of software retry | ALL | 5 <0-1000> | - | | 12 |
| 1677 | Wireless LAN | Wireless LAN driver Preamble | ALL | 1 <1-2> | - | 1: Long 2: Longshort | 12 |
| 1678 | Wireless LAN | Wireless LAN driver Operation mode | ALL | 1 <1-3> | - | 1: All 2: 11b 3: 11g | 12 |
| 1679 | Wireless LAN | Wireless LAN supplicant Wireless LAN setting | ALL | 1 <1-3> | - | This setting is whether the wireless LAN connection is enabled or disabled. 1: Unset 2: Enabled 3: Disabled | 12 |
| 1680 | Wireless LAN | Wireless LAN supplicant Path name for configuration file | ALL | - | - | Maximum 255 letters | 12 |
| 1681 | Wireless LAN | Wireless LAN supplicant Path name for client certificate | ALL | - | - | This should be the path name in full where the client certificate is located. (Maximum 255 letters) | 12 |
| 1682 | Wireless LAN | Wireless LAN supplicant Path name for secret key of client certificate | ALL | - | - | This should be the path name in full where the client certificate is located. (Maximum 255 letters) | 12 |
| 1684 | Wireless LAN | Wireless LAN supplicant Path name for CA self-certificate | ALL | - | - | This should be the path name in full where the CA self-certificate is located. (Maximum 255 letters) | 12 |
| 1685 | Wireless LAN | Wireless LAN supplicant EAP user name | ALL | - | - | This should be the user name when the EAP-TLS is used. | 12 |
| 1686 | Wireless LAN | Wireless LAN supplicant EAP user name | ALL | - | - | This should be the user name when the PEAP is used. | 12 |
| 1688 | Wireless LAN | Wireless LAN supplicant Log file output | ALL | - | - | This should be the path name to which the log file is output. (Maximum 255 letters) | 12 |
| 1689 | Wireless LAN | Wireless LAN supplicant Authentication interval | ALL | 30 <30-65535> | - | This should be the timeout interval between EAP responses. 30: 30 seconds | 12 |
| 1690 | Wireless LAN | Wireless LAN supplicant Holding interval | ALL | 60 <60-65535> | M | The EAP authentication will start after having been waited in this period when an EAP failure was received. 60: 60 seconds | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1691 | Wireless LAN | Wireless LAN supplicant EAPOL-Start Number of times of packet retry | ALL | 3 <1- 65535> | M | When an EAPOL-Start packet has been sent and the request ID can- not be received, this EAPOL-Start packet will be re-sent for the num- ber of times set in this code. 3: 3 times | 12 |
| 1692 | Wireless LAN | Wireless LAN supplicant Session resume | ALL | 2 <1-2> | - | This setting is whether the pre-master key should be updated or not upon a TLS re- negotiation. 1: Session is resumed 2: Session is not resumed | 12 |
| 1693 | Wireless LAN | Wireless LAN supplicant MAC Frame size | ALL | 1398 <1-1398> | - | This is a MAC frame size used in the wire- less LAN connection. The data is fragmented into this size. 1398: 1398 bytes | 12 |
| 1696 | Wireless LAN | Wireless LAN supplicant Device file setting for obtaining random number | ALL | /dev/ urandom | - | This should be the device file name which can obtain a seed to ini- tialize the WEP PRNG for xsupplicant. (Maximum 255 letters) | 12 |
| 1697 | Wireless LAN | Wireless LAN supplicant CRL directory designation | ALL | - | - | This should be the path name of the directory in full where the CRL file is located. (Maximum 255 letters) | 12 |
| 1699 | Wireless LAN | Wireless LAN supplicant EAP authentication type | ALL | 1 <1-3> | - | This setting is for the EAP authentication type which xsupplicant can authenticate. 1: EAP-TLS 2: PEAP 3: EAP-TLS and PEAP | 12 |
| 1700 | Wireless LAN | Wireless LAN supplicant CN name | ALL | - | - | This should be an authentication server name (basically a domain name in full). (Maximum 255 letters) | 12 |
| 1701 | Wireless LAN | Wireless LAN supplicant CN name check | ALL | 1 <1-2> | - | 1: NO 2: YES | 12 |
| 1702 | Wireless LAN | Wireless LAN supplicant Debugging level | ALL | 0 <0-7> | - | 0-7: Setting of log file output level | 12 |
| 1703 | Wireless LAN | Wireless LAN supplicant Ethereal log file output | ALL | 1 <1-2> | - | This setting is whether the Ethereal log file is output or not. 1: NO 2: YES | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1704 | Wireless LAN | Wireless LAN supplicant Update interval of PTK (Pairwise Transient Key) | ALL | 0 <0-720> | - | The update interval of a secret key across AP (Access Point) and STA (Station) can be set. This interval is for updating the secret key from STA. 0: Not updated 1-720: 1-720 minutes of interval | 12 |
| 1705 | Wireless LAN | Wireless LAN supplicant Strict packet check | ALL | 1 <1-2> | - | The Ack bit and request bit of EAPOL-Key is checked. 1: Not checked 2: Checked | 12 |
| 1706 | Wireless LAN | Wireless LAN supplicant Priority change at 4-way handshake | ALL | 1 <1-2> | - | A higher priority is given to the xsupplicant task when a 4-way handshake is started. 1: Priority not changed 2: Priority changed | 12 |
| 1707 | Wireless LAN | Wireless LAN supplicant Security level | ALL | 1 <1-3> | - | The encryption capability output in TLS clientHello message can be selected. 1: LOW 2: MIDDLE 3: HIGH | 12 |
| 1708 | | Selectable security level (EAP-TLS) | ALL | 1 <1-3> | - | These are the security level which can be selected from the user interface. This setting is not applied in case of PEAP. ("LOW" and "MIDDLE" is mandatory for PEAP) 1: LOW + MIDDLE + HIGH 2: MIDDLE + HIGH 3: HIGH | 12 |
| 1710 | Bluetooth | Bluetooth ON/OFF setting | ALL | 1 <0-1> | SYS | 0: OFF 1: ON | 1 |
| 1711 | Bluetooth | Bluetooth Device name | ALL | MFP | SYS | Maximum 32 letters | 11 |
| 1712 | Bluetooth | Bluetooth Discovery | ALL | 1 <0-1> | SYS | 0: Not allowed 1: Allowed | 1 |
| 1713 | Bluetooth | Bluetooth Security | ALL | 1 <0-1> | SYS | 0: Security function OFF 1: Security function ON | 1 |
| 1714 | Bluetooth | Bluetooth PIN | ALL | 0000 | SYS | Maximum 8 digits (8-digit sequence) This setting is valid only when the bluetooth security function is ON. | 11 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1715 | Bluetooth | Bluetooth Data encryption | ALL | 1 <0-1>> | SYS | 0: Not encrypted 1: Encrypted This setting is valid only when the bluetooth security function is ON. | 1 |
| 1720 | Network | IP address range for IP filter (Minimum area 1) | ALL | - | - | IP filter minimum area 1 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1721 | Network | IP address range for IP filter (Maximum area 1) | ALL | - | - | IP filter maximum area 1 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1722 | Network | IP address range for IP filter I (Minimum area 2) | ALL | - | - | IP filter minimum area 2 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1723 | Network | IP address range for IP filter (Maximum area 2) | ALL | - | - | IP filter maximum area 2 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1724 | Network | IP address range for IP filter (Minimum area 3) | ALL | - | - | IP filter minimum area 3 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1725 | Network | IP address range for IP filter (Maximum area 3) | ALL | - | - | IP filter maximum area 3 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1726 | Network | IP address range for IP filter (Minimum area 4) | ALL | - | - | IP filter minimum area 4 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1727 | Network | IP address range for IP filter (Maximum area 4) | ALL | - | - | IP filter maximum area 4 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1728 | Network | IP address range for IP filter (Minimum area 5) | ALL | - | - | IP filter minimum area 5 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000) | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1729 | Network | IP address range for IP filter (Maximum area 5) | ALL | - | - | IP filter maximum area 5 000.000.000.000- 255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1730 | Network | IP address range for IP filter (Minimum area 6) | ALL | - | - | IP filter minimum area 6 000.000.000.000- 255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1731 | Network | IP address range for IP filter (Maximum area 6) | ALL | - | - | IP filter maximum area 6 000.000.000.000- 255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1732 | Network | IP address range for IP filter (Minimum area 7) | ALL | - | - | IP filter minimum area 7 000.000.000.000- 255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1733 | Network | IP address range for IP filter (Maximum area 7) | ALL | - | - | IP filter maximum area 7 000.000.000.000- 255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1734 | Network | IP address range for IP filter (Minimum area 8) | ALL | - | - | IP filter minimum area 8 000.000.000.000- 255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1735 | Network | IP address range for IP filter (Maximum area 8) | ALL | - | - | IP filter maximum area 8 000.000.000.000- 255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1736 | Network | IP address range for IP filter (Minimum area 9) | ALL | - | - | IP filter minimum area 9 000.000.000.000- 255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1737 | Network | IP address range for IP filter (Maximum area 9) | ALL | - | - | IP filter maximum area 9 000.000.000.000- 255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1738 | Network | IP address range for IP filter (Minimum area 10) | ALL | - | - | IP filter minimum area 10 000.000.000.000- 255.255.255.255 (Default value: 000.000.000.000) | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1739 | Network | IP address range for IP filter (Maximum area 10) | ALL | - | - | IP filter maximum area 10 000.000.000.000- 255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1740 | Network | SSL setting SSL ftp server OFF/ON | ALL | 2 <1-2> | - | 1: Enabled 2: Disabled | 12 |
| 1741 | Network | SSL setting HTTP server port number | ALL | 10443 <1- 65535> | - | SSL HTTP server port number | 12 |
| 1742 | Network | SSL setting IPP server OFF/ON setting | ALL | 2 <1-2> | - | 1: Enabled 2: Disabled | 12 |
| 1743 | Network | SSL setting IPP server port number | ALL | 443 <1- 65535> | - | SSL IPP server port number | 12 |
| 1744 | Network | SSL setting SSL ftp server OFF/ON | ALL | 2 <1-2> | - | OFF/ON 1: Valid 2: Invalid | 12 |
| 1745 | Network | SSL setting SSL ftp server Port | ALL | 990 <1-5535> | - | Port number to FTP Server | 12 |
| 1746 | Network | SSL setting SSL LDAP Client OFF/ON | ALL | 2 <1-2> | - | OFF/ON 1: Valid 2: Invalid | 12 |
| 1747 | Network | SSL setting SSL LDAP Client Port | ALL | 636 <1- 65535> | - | Port number to LDAP Server | 12 |
| 1748 | Network | SSL setting SSL POP3 Client OFF/ON | ALL | 2 <1-2> | - | OFF/ON 1: Valid 2: Invalid | 12 |
| 1749 | Network | SSL setting SSL POP3 Client Port | ALL | 995 <1- 65535> | - | Port number to POP3 Server | 12 |
| 1750 | Network | SSL setting SSL SMTP Client OFF/ON | ALL | 2 <1-2> | - | 2: Invalid 3: SMTP with TLS (STARTTLS) 4: SMTPS (SMTP OverSSL) | 12 |
| 1751 | Network | SSL setting SSL SMTP Client Port | ALL | 465 <1- 65535> | - | Port number to SMTP Server | 12 |
| 1755 | Network | Enabling server's IP address acquired by DHCP | ALL | 2 <1-2> | - | Domain Name Server option (6) 1: Enabled 2: Disabled * This value is used only when DHCP is enabled. | 12 |
| 1756 | Network | Enabling server's IP address acquired by DHCP | ALL | 2 <1-2> | - | NetBIOS over TCP/IP Name Server option (44) = Primary and Secondary Wins NAME 1: Enabled 2: Disabled * This value is used only when DHCP is enabled. | 12 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|--------------------|----------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1757 | Network | Enabling server's IP address acquired by DHCP | | ALL | 1 <1-2> | - | The Host Name Vendor Extension option (12) 1: Enabled 2: Disabled This value is used only when DHCP is enabled. | 12 |
| 1762 | Network | Enabling server's IP address acquired by DHCP | | ALL | 2 <1-2> | - | SNTP Server Option (42) NTP Server Address 1: Enabled 2: Disabled * This value is used only when DHCP is enabled. | 12 |
| 1763 | Wireless LAN | Wireless LAN supplicant Direction of Ethereal log file output | | ALL | - | - | Maximum 63 letters | 12 |
| 1764 | Wireless LAN | Wireless LAN supplicant Control sequence setting of "Cipher Suite" | | ALL | - | - | Maximum 255 letters | 12 |
| 1765 | Wireless LAN | Wireless LAN supplicant Path name for user certificate | | ALL | - | - | Maximum 63 letters | 12 |
| 1766 | Wireless LAN | Wireless LAN supplicant Path name entered for CA self-certificate | | ALL | - | - | Maximum 63 letters | 12 |
| 1767 | Network | Enabling server's IP address acquired by DHCP | | ALL | 2 <1-2> | SYS | DNS domain name Option (15) DNS domain name of the client 1: Enabled 2: Disabled * This value is used only when DHCP is enabled. | 12 |
| 1768 | Network | Previous IP address | | ALL | - | - | 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000) | 12 |
| 1778 | General | Hang-up period of control panel at the 3rd misentry of administrator's password | | ALL | 1 <0-7> | SYS | 0: No hang-up 1: 0.5 minutes (= 30 seconds) 2: 1 minute 3: 3 minutes 4: 5 minutes 5: 10 minutes 6: 15 minutes 7: 30 minutes | 1 |
| 1779 | Network | Default data saving directory of "Scan to File" | | ALL | 0 <0-2> | SYS | 0: Local directory 1: REMOTE 1 2: REMOTE 2 | 1 |
| 1781-0 | Network | Notification of scan job | When job completed | ALL | 0 <0-1> | SYS | Sets the notification method of scan job completion. 0: Invalid 1: Valid | 4 |
| 1781-1 | | | On error | ALL | 0 <0-1> | SYS | | 4 |

| Setting mode (08) | | | | | | | | |
|-------------------|------------------|---|---|-------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1782 | Network | File name format of "Save as file" and Email transmission | | ALL | 0 <0-5> | SYS | Sets the naming method of the file of "Save as file" and Email transmission. 0: [FileName]-[Data]-[Page] 1: [FileName]-[Page]-[Data] 2: [Data]-[FileName]-[Page] 3: [Data]-[Page]-[FileName] 4: [Page]-[FileName]-[Data] 5: [Page]-[Data]-[FileName] | 1 |
| 1783 | Network | Date display format of the file name of "Save as file" and Email transmission | | ALL | 0 <0-4> | SYS | Sets the data display format of the file of "Save as file" and Email transmission. 0: [YYYY][MM][DD][HH][mm][SS] 1: [YY][MM][DD][HH][mm][SS] 2: [YYYY][MM][DD] 3: [YY][MM][DD] 4: [HH][mm][SS] The order of [YY], [MM] and [DD] varies depending on the setting of the code 08-640 (Data display format). | 1 |
| 1784 | Network | Single page data saving directory at "Save as file" | | ALL | 0 <0-1> | SYS | Sets the directory where the file of "Save as file" is saved. 0: Save it under a subfolder 1: Save it without creating a subfolder | 1 |
| 1785 | Network | Page number display format of the file of "Save as file" and Email transmission | | ALL | 4 <4-6> | SYS | Sets the digit of a page number attached on the file. 4-6: 4-6 digits | 1 |
| 1786 | Network | Extension (suffix) format of the file of "Save as file" | | ALL | 3 <3-6> | SYS | Sets the extension digits of the file to be saved. 3: Auto 4: 4 digits 5: 5 digits 6: 6 digits | 1 |
| 1800-0 | Image processing | Color toner forced supply time setting | Y | ALL (color) | 70 <0-255> | M | Sets the motor driving time of the developer unit at the time of the color toner forced supply. 0-255: Setting value x 0.1 seconds | 4 |
| 1800-1 | | | M | ALL (color) | 70 <0-255> | M | | 4 |
| 1800-2 | | | C | ALL (color) | 70 <0-255> | M | | 4 |

| Setting mode (08) | | | | | | | | |
|-------------------|------------------|---|--------------------------|-------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1801 | Image processing | Color toner forced supply count setting | | ALL (color) | 7 <1-10> | M | Sets the number of times of the color toner forced supply. | 1 |
| 1802-0 | Image processing | Start up setting of the developer material stabilizing mode. | Level | ALL | 3 <2-8> | M | Sets the performing level of the developer material stabilizing operation. | 4 |
| 1802-1 | | | Pattern interval | ALL | 50 <0-100> | M | Set the interval time between performances of developer material stabilizing operation. | 4 |
| 1802-2 | | | Number of repeating time | ALL | 10 <0-20> | M | Set the number of repeating times of the developer material stabilizing operation. | 4 |
| 1915 | Network | Filing size for Network scanning function | | ALL | 0 <0-1> | SYS | 0: Eliminates 2 mm from circumference (Void: 2 mm) 1: No space eliminated (Void: 0 mm) | 1 |
| 1920 | Network | Device domain name of device authentication | | ALL | - | UTY | Maximum 128 letters | 12 |
| 1921 | Network | Windows domain No. 2 of user authentication | | ALL | - | UTY | Maximum 128 letters | 12 |
| 1922 | Network | Windows domain No. 3 of user authentication | | ALL | - | UTY | Maximum 128 letters | 12 |
| 1923 | Network | LDAP authentication Server type | | ALL | 1 <1-2> | NIC | 1: Windows Server 2: Not Windows Server | 12 |
| 1924 | Network | LDAP authentication User attribute | | ALL | - | NIC | Sets a user attribute name. | 12 |
| 1925 | Network | Execution of user authentication when the user ID is not entered | | ALL | 2 <0-2> | SYS | 0: Forcible execution 1: Execution impossible (pooled in the invalid queue) 2: Forcible deletion | 1 |
| 1926 | FAX | Tab/cover sheet printing at FAX reception Printing stop function | | ALL | 0 <0-1> | SYS | Sets on or off of the printing function of special sheets such as tab or cover sheet of FAX, Email or list print. 0: Function off 1: Function on | 1 |
| 1928 | Network | Role Based Access LDAP search index | | ALL | 0 <0-4294967295> | SYS | | 5 |
| 1936 | Network | AppleTalk device name | | ALL | MFP-serial | UTY | Maximum 32 letters The Network-related serial number of the equipment appears at "serial". | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------|----------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1937 | Network | User name and password at user authentication or "Save as file" | ALL | 0 <0-2> | SYS | 0: User name and password of the device 1: User name and password at the user authentication (Template registration information comes first when a template is retrieved.) 2: User name and password at the user authentication (User information of the authentication comes first when a template is retrieved.) | 1 |
| 1938 | General | Reformatting process due to a version change of SYS ROM | ALL | 2 <0-2> | - | Use this setting to reformat the specific partition whose file system has been changed in Ver.2, at the version up/downgrade of the SYS ROM. No reformatting process shall be used in any cases other than this version change. 0: Waiting (No reformatting) 1: dosFs to catFs (Version upgrade from Ver.1 to Ver.2 or later) 2: catFs to dosFs (Version downgrade from Ver.2 or later to Ver.1) | 7 |
| 1939 | Network | STAGE I/F startup setting | | | | 32bit definition 0: Disabled bit1: Normal Remote I/F bit2: Remote Scan I/F | |
| 1940 | Network | STAGE port number | | | | | |
| 1950 | Network | SMB signature for SMB server | ALL | 1 <0-3> | UTY | 1: Auto 2: Valid 3: Invalid | 12 |
| 1951 | Network | SMB signature for SMB client | ALL | 1 <0-3> | UTY | 1: Auto 2: Valid 3: Invalid | 12 |
| 1952 | Network | Device name for device authentication | ALL | - | UTY | Maximum 128 letters | 12 |
| 1953 | Network | Password for the device name used for device authentication | ALL | - | UTY | Maximum 128 letters | 12 |
| 1954 | Network | PDC2 of user authentication | ALL | - | UTY | Maximum 128 letters | 12 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|------------------------------|----------|----------------------------------|-----|---------------------|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1955 | Network | BDC2 of user authentication | ALL | - | UTY | Maximum 128 letters | 12 |
| 1956 | Network | PDC3 of user authentication | ALL | - | UTY | Maximum 128 letters | 12 |
| 1957 | Network | BDC3 of user authentication | ALL | - | UTY | Maximum 128 letters | 12 |
| 1958 | Network | PDC of device authentication | ALL | - | UTY | Maximum 128 letters | 12 |
| 1959 | Network | BDC of device authentication | ALL | - | UTY | Maximum 128 letters | 12 |

Note:

In this equipment, a toner image is formed on the transfer belt prior to a paper feeding. When the feeding retry occurs and the transport timing is delayed, the toner image on the transfer belt is cleaned off without the 2nd transfer since the paper cannot be reached for the 2nd transfer process.

After that, the toner image formation is retried while the paper is waited.

In this case, the toner for this image formation is consumed wastefully since the toner image on the transfer belt is already cleaned off, even though the printing is normally completed.

Therefore, note that the excessive toner will be consumed consequently when the upper limit value of feeding retry counter is set larger or set as "0" (no limit).

The toner is also consumed wastefully when the paper misfeeding occurs. Replace the roller at earlier timing if the paper misfeedings have occurred frequently.

<<Pixel counter related code>>(Ch.2.2.6)

Note:

In the pixel counter function, the twin color copy mode is regarded as the full color mode.

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|-------------|------------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1500 | Pixel counter | Standard paper size setting | ALL | EUR: 0 UC: 1 JPN: 0 <0-1> | SYS | Selects the standard paper size to convert it into the pixel count (%). 0: A4 1: LT | 1 |
| 1501 | Pixel counter | Pixel counter all clearing | ALL | - | SYS | Clears all information related to the pixel counter. | 3 |
| 1502 | Pixel counter | Service technician reference counter clearing | ALL | - | SYS | Clears all information related to the service technician reference pixel counter. | 3 |
| 1503 | Pixel counter | Toner cartridge reference counter clearing | ALL | - | SYS | Clears all information related to the toner cartridge reference pixel counter. | 3 |
| 1504 | Pixel counter | Pixel counter display setting | ALL | 1 <0-1> | SYS | Selects whether or not to display the pixel counter on the LCD screen. 0: Displayed 1: Not displayed | 1 |
| 1505 | Pixel counter | Displayed reference setting | ALL | 0 <0-1> | SYS | Selects the reference when displaying the pixel counter on the LCD screen. 0: Service technician reference 1: Toner cartridge reference | 1 |
| 1506 | Pixel counter | Toner empty determination counter setting | ALL | 0 <0-1> | SYS | Selects the counter to determine toner empty. 0: Output pages 1: Pixel counter | 1 |
| 1507 | Pixel counter | Threshold setting for toner empty determination (Output pages) | ALL | 500 <0-999> | SYS | Sets the number of output pages to determine toner empty. This setting is valid when "0" is set at 08-1506. | 1 |
| 1508 | Pixel counter | Threshold setting for toner empty determination (Pixel counter) | ALL | 21500 <0-60000> | SYS | Sets the number of output pages to determine toner empty. This setting is valid when "1" is set at 08-1506. | 1 |
| 1509 | Pixel counter | Pixel counter clear flag/Service technician reference | ALL | 0 <0-1> | SYS | Becomes "1" when 08-1502 is performed. | 2 |
| 1510 | Pixel counter | Service technician reference cleared date | ALL | - | SYS | Displays the date on which 08-1502 was performed. | 2 |
| 1511 | Pixel counter | Toner cartridge reference cleared date (Y) | ALL (color) | - | SYS | Displays the date on which 08-1503 was performed. | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|-------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1512 | Pixel counter | Toner cartridge reference cleared date (M) | ALL (color) | - | SYS | Displays the date on which 08-1503 was performed. | 2 |
| 1513 | Pixel counter | Toner cartridge reference cleared date (C) | ALL (color) | - | SYS | Displays the date on which 08-1503 was performed. | 2 |
| 1514 | Pixel counter | Toner cartridge reference cleared date (K) | ALL | - | SYS | Displays the date on which 08-1503 was performed. | 2 |
| 1515 | Pixel counter | Toner cartridge reference count started date (Y) | ALL (color) | - | SYS | Displays the date on which 08-1503 was performed. | 2 |
| 1516 | Pixel counter | Toner cartridge reference count started date (M) | ALL (color) | - | SYS | Displays the date on which 08-1503 was performed. | 2 |
| 1517 | Pixel counter | Toner cartridge reference count started date (C) | ALL (color) | - | SYS | Displays the date on which 08-1503 was performed. | 2 |
| 1518 | Pixel counter | Toner cartridge reference count started date (K) | ALL | - | SYS | Displays the date on which 08-1503 was performed. | 2 |
| 1547 | Pixel counter | Number of output pages/ fullcolor (Service technician reference) | PPC (color) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the copy function, full color mode and service technician reference. [Unit. page] | 2 |
| 1548 | Pixel counter | Number of output pages/ black (Service technician reference) | PPC (black) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the copy function, black mode and service technician reference. [Unit. page] | 2 |
| 1549 | Pixel counter | Number of output pages/ fullcolor (Service technician reference) | PRT (color) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the printer function, full color mode and service technician reference. [Unit. page] | 2 |
| 1550 | Pixel counter | Number of output pages/ black (Service technician reference) | PRT (black) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the printer function, black mode and service technician reference. [Unit. page] | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|-------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1551 | Pixel counter | Number of output pages/black (Service technician reference) | FAX (black) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the FAX function, black mode and service technician reference. [Unit. page] | 2 |
| 1552 | Pixel counter | Number of output pages/full color (K) (Toner cartridge reference) | PPC (color) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the copy function, full color mode, toner K and toner cartridge reference. [Unit. page] | 2 |
| 1553 | Pixel counter | Number of output pages/black (Toner cartridge reference) | PPC (black) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the copy function, black mode and toner cartridge reference. [Unit. page] | 2 |
| 1554 | Pixel counter | Number of output pages/full color (K) (Toner cartridge reference) | PRT (color) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the printer function, full color mode, toner K and toner cartridge reference. [Unit. page] | 2 |
| 1555 | Pixel counter | Number of output pages/black (Toner cartridge reference) | PRT (black) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the printer function, black mode and toner cartridge reference. [Unit. page] | 2 |
| 1556 | Pixel counter | Number of output pages/black (Toner cartridge reference) | FAX (black) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the FAX function, black mode and toner cartridge reference. [Unit. page] | 2 |
| 1557 | Pixel counter | Number of output pages/full color (Y) (Toner cartridge reference) | PPC (color) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the copy function, full color mode, toner Y and toner cartridge reference. [Unit. page] | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|----------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1558 | Pixel counter | Number of output pages/ full color (Y) (Toner cartridge reference) | PRT (color) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the printer function, full color mode, toner Y and toner cartridge reference. [Unit. page] | 2 |
| 1559 | Pixel counter | Number of output pages/ full color (M) (Toner cartridge reference) | PPC (color) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the copy function, full color mode, toner M and toner cartridge reference. [Unit. page] | 2 |
| 1560 | Pixel counter | Number of output pages/ full color (M) (Toner cartridge reference) | PRT (color) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the printer function, full color mode, toner M and toner cartridge reference. [Unit. page] | 2 |
| 1561 | Pixel counter | Number of output pages/ full color (C) (Toner cartridge reference) | PPC (color) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the copy function, full color mode, toner C and toner cartridge reference. [Unit. page] | 2 |
| 1562 | Pixel counter | Number of output pages/ full color (C) (Toner cartridge reference) | ALL (color) | <8 digits> | SYS | Counts the number of output pages converted to the standard paper size in the printer function, full color mode, toner C and toner cartridge reference. [Unit. page] | 2 |
| 1563 | Pixel counter | Toner cartridge Y replacement counter | ALL (color) | <3 digits> | SYS | Counts the number of time of the toner cartridge Y replacement. | 2 |
| 1564 | Pixel counter | Toner cartridge M replacement counter | ALL (color) | <3 digits> | SYS | Counts the number of time of the toner cartridge M replacement. | 2 |
| 1565 | Pixel counter | Toner cartridge C replacement counter | ALL (color) | <3 digits> | SYS | Counts the number of time of the toner cartridge C replacement. | 2 |
| 1566 | Pixel counter | Toner cartridge K replacement counter | ALL | <3 digits> | SYS | Counts the number of time of the toner cartridge K replacement. | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|-------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1577 | Pixel counter | Average pixel count/full color (Y+M+C+K) (Service technician reference) | PPC (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, full color mode, all toner and service technician reference. [Unit: 0.01%] | 2 |
| 1578 | Pixel counter | Average pixel count/full color (Y) (Service technician reference) | PPC (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, full color mode, toner Y and service technician reference. [Unit: 0.01%] | 2 |
| 1579 | Pixel counter | Average pixel count/full color (M) (Service technician reference) | PPC (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, full color mode, toner M and service technician reference. [Unit: 0.01%] | 2 |
| 1580 | Pixel counter | Average pixel count/full color (C) (Service technician reference) | PPC (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, full color mode, toner C and service technician reference. [Unit: 0.01%] | 2 |
| 1581 | Pixel counter | Average pixel count/full color (K) (Service technician reference) | PPC (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, full color mode, toner K and service technician reference. [Unit: 0.01%] | 2 |
| 1582 | Pixel counter | Average pixel count/full color (Y+M+C+K) (Service technician reference) | PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, full color mode, all toner and service technician reference. [Unit: 0.01%] | 2 |
| 1583 | Pixel counter | Average pixel count/full color (Y) (Service technician reference) | PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, full color mode, toner Y and service technician reference. [Unit: 0.01%] | 2 |
| 1584 | Pixel counter | Average pixel count/full color (M) (Service technician reference) | PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, full color mode, toner M and service technician reference. [Unit: 0.01%] | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|---------------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1585 | Pixel counter | Average pixel count/full color (C) (Service technician reference) | PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, full color mode, toner C and service technician reference. [Unit: 0.01%] | 2 |
| 1586 | Pixel counter | Average pixel count/full color (K) (Service technician reference) | PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, full color mode, toner K and service technician reference. [Unit: 0.01%] | 2 |
| 1587 | Pixel counter | Average pixel count/full color (Y+M+C+K) (Service technician reference) | PPC/ PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy/printer function, full color mode, all toner and service technician reference. [Unit: 0.01%] | 2 |
| 1588 | Pixel counter | Average pixel count/full color (Y) (Service technician reference) | PPC/ PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy/printer function, full color mode, toner Y and service technician reference. [Unit: 0.01%] | 2 |
| 1589 | Pixel counter | Average pixel count/full color (M) (Service technician reference) | PPC/ PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy/printer function, full color mode, toner M and service technician reference. [Unit: 0.01%] | 2 |
| 1590 | Pixel counter | Average pixel count/full color (C) (Service technician reference) | PPC/ PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy/printer function, full color mode, toner C and service technician reference. [Unit: 0.01%] | 2 |
| 1591 | Pixel counter | Average pixel count/full color (K) (Service technician reference) | PPC/ PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy/printer function, full color mode, toner K and service technician reference. [Unit: 0.01%] | 2 |
| 1592 | Pixel counter | Average pixel count/black (Service technician reference) | PPC (black) | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, black mode and service technician reference. [Unit: 0.01%] | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|---------------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1593 | Pixel counter | Average pixel count/black (Service technician reference) | PRT (black) | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, black mode and service technician reference. [Unit: 0.01%] | 2 |
| 1594 | Pixel counter | Average pixel count/black (Service technician reference) | FAX (black) | 0 <0-10000> | SYS | Displays the average pixel count in the FAX function, black mode and service technician reference. [Unit: 0.01%] | 2 |
| 1595 | Pixel counter | Average pixel count/black (Service technician reference) | PPC/PRT/FAX (black) | 0 <0-10000> | SYS | Displays the average pixel count in the copy/printer/FAX function, black mode and service technician reference. [Unit: 0.01%] | 2 |
| 1596 | Pixel counter | Latest pixel count/full color (Y+M+C+K) (Service technician reference) | PPC (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the copy function, full color mode, all toner and service technician reference. [Unit: 0.01%] | 2 |
| 1597 | Pixel counter | Latest pixel count/full color (Y) (Service technician reference) | PPC (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the copy function, full color mode, toner Y and service technician reference. [Unit: 0.01%] | 2 |
| 1598 | Pixel counter | Latest pixel count/full color (M) (Service technician reference) | PPC (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the copy function, full color mode, toner M and service technician reference. [Unit: 0.01%] | 2 |
| 1599 | Pixel counter | Latest pixel count/full color (C) (Service technician reference) | PPC (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the copy function, full color mode, toner C and service technician reference. [Unit: 0.01%] | 2 |
| 1600 | Pixel counter | Latest pixel count/full color (K) (Service technician reference) | PPC (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the copy function, full color mode, toner K and service technician reference. [Unit: 0.01%] | 2 |
| 1601 | Pixel counter | Latest pixel count/full color (Y+M+C+K) (Service technician reference) | PRT (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the printer function, full color mode, all toner and service technician reference. [Unit: 0.01%] | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|-------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1602 | Pixel counter | Latest pixel count/full color (Y) (Service technician reference) | PRT (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the printer function, full color mode, toner Y and service technician reference. [Unit: 0.01%] | 2 |
| 1603 | Pixel counter | Latest pixel count/full color (M) (Service technician reference) | PRT (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the printer function, full color mode, toner M and service technician reference. [Unit: 0.01%] | 2 |
| 1604 | Pixel counter | Latest pixel count/full color (C) (Service technician reference) | PRT (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the printer function, full color mode, toner C and service technician reference. [Unit: 0.01%] | 2 |
| 1605 | Pixel counter | Latest pixel count/full color (K) (Service technician reference) | PRT (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the printer function, full color mode, toner K and service technician reference. [Unit: 0.01%] | 2 |
| 1606 | Pixel counter | Latest pixel count/black (Service technician reference) | PPC (black) | 0 <0-10000> | SYS | Displays the latest pixel count in the copy function, black mode and service technician reference. [Unit: 0.01%] | 2 |
| 1607 | Pixel counter | Latest pixel count/black (Service technician reference) | PRT (black) | 0 <0-10000> | SYS | Displays the latest pixel count in the printer function, black mode and service technician reference. [Unit: 0.01%] | 2 |
| 1608 | Pixel counter | Latest pixel count/black (Service technician reference) | FAX (black) | 0 <0-10000> | SYS | Displays the latest pixel count in the FAX function, black mode and service technician reference. [Unit: 0.01%] | 2 |
| 1609 | Pixel counter | Average pixel count/full color (Y) (Toner cartridge reference) | PPC (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, full color mode, toner Y and toner cartridge reference. [Unit: 0.01%] | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|-------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1610 | Pixel counter | Average pixel count/full color (M) (Toner cartridge reference) | PPC (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, full color mode, toner M and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1611 | Pixel counter | Average pixel count/full color (C) (Toner cartridge reference) | PPC (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, full color mode, toner C and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1612 | Pixel counter | Average pixel count/full color (K) (Toner cartridge reference) | PPC (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, full color mode, toner K and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1613 | Pixel counter | Average pixel count/black (Toner cartridge reference) | PPC (black) | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, black mode and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1614 | Pixel counter | Average pixel count/full color (K)+black (Toner cartridge reference) | PPC | 0 <0-10000> | SYS | Displays the average pixel count in the copy function, full color/black mode, toner K and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1615 | Pixel counter | Average pixel count/full color (Y) (Toner cartridge reference) | PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, full color mode, toner Y and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1616 | Pixel counter | Average pixel count/full color (M) (Toner cartridge reference) | PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, full color mode, toner M and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1617 | Pixel counter | Average pixel count/full color (C) (Toner cartridge reference) | PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, full color mode, toner C and toner cartridge reference. [Unit: 0.01%] | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|--|---------------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1618 | Pixel counter | Average pixel count/full color (K) (Toner cartridge reference) | PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, full color mode, toner K and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1619 | Pixel counter | Average pixel count/black (Toner cartridge reference) | PRT (black) | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, black mode and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1620 | Pixel counter | Average pixel count/full color (K)+black (Toner cartridge reference) | PRT | 0 <0-10000> | SYS | Displays the average pixel count in the printer function, full color/black mode, toner K and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1621 | Pixel counter | Average pixel count/full color (Y) (Toner cartridge reference) | PPC/ PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy/printer function, full color mode, toner Y and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1622 | Pixel counter | Average pixel count/full color (M) (Toner cartridge reference) | PPC/ PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy/printer function, full color mode, toner M and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1623 | Pixel counter | Average pixel count/full color (C) (Toner cartridge reference) | PPC/ PRT (color) | 0 <0-10000> | SYS | Displays the average pixel count in the copy/printer function, full color mode, toner C and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1624 | Pixel counter | Average pixel count/full color (K)+black (Toner cartridge reference) | PPC/ PRT/ FAX | 0 <0-10000> | SYS | Displays the average pixel count in the copy/printer/FAX function, black mode, toner K and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1625 | Pixel counter | Average pixel count/black (Toner cartridge reference) | FAX (black) | 0 <0-10000> | SYS | Displays the average pixel count in the FAX function, black mode and toner cartridge reference. [Unit: 0.01%] | 2 |

| Setting mode (08) | | | | | | | |
|-------------------|----------------|---|-------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1626 | Pixel counter | Latest pixel count/full color (Y) (Toner cartridge reference) | PPC (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the copy function, full color mode, toner Y and toner cartridge reference. [Unit:0.01%] | 2 |
| 1627 | Pixel counter | Latest pixel count/full color (M) (Toner cartridge reference) | PPC (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the copy function, full color mode, toner M and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1628 | Pixel counter | Latest pixel count/full color (C) (Toner cartridge reference) | PPC (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the copy function, full color mode, toner C and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1629 | Pixel counter | Latest pixel count/full color (K) (Toner cartridge reference) | PPC (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the copy function, full color mode, toner K and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1630 | Pixel counter | Latest pixel count/full color (Y) (Toner cartridge reference) | PRT (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the printer function, full color mode, toner Y and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1631 | Pixel counter | Latest pixel count/full color (M) (Toner cartridge reference) | PRT (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the printer function, full color mode, toner M and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1632 | Pixel counter | Latest pixel count/full color (C) (Toner cartridge reference) | PRT (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the printer function, full color mode, toner C and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1633 | Pixel counter | Latest pixel count/full color (K) (Toner cartridge reference) | PRT (color) | 0 <0-10000> | SYS | Displays the latest pixel count in the printer function, full color mode, toner K and toner cartridge reference. [Unit: 0.01%] | 2 |
| 1634 | Pixel counter | Latest pixel count/black (Toner cartridge reference) | FAX (black) | 0 <0-10000> | SYS | Displays the latest pixel count in the FAX function, black mode and toner cartridge reference. [Unit: 0.01%] | 2 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|-------------|----------------------------------|------------|---|--|----|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure | |
| 1639 | Pixel counter | Latest pixel count/black (Toner cartridge reference) | PPC (black) | 0 <0-10000> | SYS | Displays the latest pixel count in the copy function, black mode and toner cartridge reference. [Unit: 0.01%] | 2 | |
| 1640 | Pixel counter | Latest pixel count/black (Toner cartridge reference) | PRT (black) | 0 <0-10000> | SYS | Displays the latest pixel count in the printer function, black mode and toner cartridge reference. [Unit: 0.01%] | 2 | |
| 1641-0 | Pixel counter | Pixel count distribution/full color (Y) | 0-5% | PPC (color) | <8 digits> | SYS | The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distributions in the copy function, full color mode and toner Y are displayed. [Unit: page] | 14 |
| 1641-1 | | | 5.1-10% | PPC (color) | <8 digits> | SYS | | 14 |
| 1641-2 | | | 10.1-15% | PPC (color) | <8 digits> | SYS | | 14 |
| 1641-3 | | | 15.1-20% | PPC (color) | <8 digits> | SYS | | 14 |
| 1641-4 | | | 20.1-25% | PPC (color) | <8 digits> | SYS | | 14 |
| 1641-5 | | | 25.1-30% | PPC (color) | <8 digits> | SYS | | 14 |
| 1641-6 | | | 30.1-40% | PPC (color) | <8 digits> | SYS | | 14 |
| 1641-7 | | | 40.1-60% | PPC (color) | <8 digits> | SYS | | 14 |
| 1641-8 | | | 60.1-80% | PPC (color) | <8 digits> | SYS | | 14 |
| 1641-9 | | | 80.1-100% | PPC (color) | <8 digits> | SYS | | 14 |
| 1642-0 | Pixel counter | Pixel count distribution/full color (M) | 0-5% | PPC (color) | <8 digits> | SYS | The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distributions in the copy function, full color mode and toner M are displayed. [Unit: page] | 14 |
| 1642-1 | | | 5.1-10% | PPC (color) | <8 digits> | SYS | | 14 |
| 1642-2 | | | 10.1-15% | PPC (color) | <8 digits> | SYS | | 14 |
| 1642-3 | | | 15.1-20% | PPC (color) | <8 digits> | SYS | | 14 |
| 1642-4 | | | 20.1-25% | PPC (color) | <8 digits> | SYS | | 14 |
| 1642-5 | | | 25.1-30% | PPC (color) | <8 digits> | SYS | | 14 |
| 1642-6 | | | 30.1-40% | PPC (color) | <8 digits> | SYS | | 14 |
| 1642-7 | | | 40.1-60% | PPC (color) | <8 digits> | SYS | | 14 |
| 1642-8 | | | 60.1-80% | PPC (color) | <8 digits> | SYS | | 14 |
| 1642-9 | | | 80.1-100% | PPC (color) | <8 digits> | SYS | | 14 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|-----------|-------------|----------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1643-0 | Pixel counter | Pixel count distribution/ full color (C) | 0-5% | PPC (color) | <8 digits> | SYS | The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distributions in the copy function, full color mode and toner C are displayed. [Unit: page] | 14 |
| 1643-1 | | | 5.1-10% | PPC (color) | <8 digits> | SYS | | 14 |
| 1643-2 | | | 10.1-15% | PPC (color) | <8 digits> | SYS | | 14 |
| 1643-3 | | | 15.1-20% | PPC (color) | <8 digits> | SYS | | 14 |
| 1643-4 | | | 20.1-25% | PPC (color) | <8 digits> | SYS | | 14 |
| 1643-5 | | | 25.1-30% | PPC (color) | <8 digits> | SYS | | 14 |
| 1643-6 | | | 30.1-40% | PPC (color) | <8 digits> | SYS | | 14 |
| 1643-7 | | | 40.1-60% | PPC (color) | <8 digits> | SYS | | 14 |
| 1643-8 | | | 60.1-80% | PPC (color) | <8 digits> | SYS | | 14 |
| 1643-9 | | | 80.1-100% | PPC (color) | <8 digits> | SYS | | 14 |
| 1644-0 | Pixel counter | Pixel count distribution/ full color (K) | 0-5% | PPC (color) | <8 digits> | SYS | The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distributions in the copy function, full color mode and toner K are displayed. [Unit: page] | 14 |
| 1644-1 | | | 5.1-10% | PPC (color) | <8 digits> | SYS | | 14 |
| 1644-2 | | | 10.1-15% | PPC (color) | <8 digits> | SYS | | 14 |
| 1644-3 | | | 15.1-20% | PPC (color) | <8 digits> | SYS | | 14 |
| 1644-4 | | | 20.1-25% | PPC (color) | <8 digits> | SYS | | 14 |
| 1644-5 | | | 25.1-30% | PPC (color) | <8 digits> | SYS | | 14 |
| 1644-6 | | | 30.1-40% | PPC (color) | <8 digits> | SYS | | 14 |
| 1644-7 | | | 40.1-60% | PPC (color) | <8 digits> | SYS | | 14 |
| 1644-8 | | | 60.1-80% | PPC (color) | <8 digits> | SYS | | 14 |
| 1644-9 | | | 80.1-100% | PPC (color) | <8 digits> | SYS | | 14 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|---|-----------|----------------|----------------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1645-0 | Pixel counter | Pixel count distribution/ full color (Y) | 0-5% | PRT (color) | <8 digits> | SYS | The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distributions in the printer function, full color mode and toner Y are displayed. [Unit: page] | 14 |
| 1645-1 | | | 5.1-10% | PRT (color) | <8 digits> | SYS | | 14 |
| 1645-2 | | | 10.1-15% | PRT (color) | <8 digits> | SYS | | 14 |
| 1645-3 | | | 15.1-20% | PRT (color) | <8 digits> | SYS | | 14 |
| 1645-4 | | | 20.1-25% | PRT (color) | <8 digits> | SYS | | 14 |
| 1645-5 | | | 25.1-30% | PRT (color) | <8 digits> | SYS | | 14 |
| 1645-6 | | | 30.1-40% | PRT (color) | <8 digits> | SYS | | 14 |
| 1645-7 | | | 40.1-60% | PRT (color) | <8 digits> | SYS | | 14 |
| 1645-8 | | | 60.1-80% | PRT (color) | <8 digits> | SYS | | 14 |
| 1645-9 | | | 80.1-100% | PRT (color) | <8 digits> | SYS | | 14 |
| 1646-0 | Pixel counter | Pixel count distribution/ full color (M) | 0-5% | PRT (color) | <8 digits> | SYS | The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distributions in the printer function, full color mode and toner M are displayed. [Unit: page] | 14 |
| 1646-1 | | | 5.1-10% | PRT (color) | <8 digits> | SYS | | 14 |
| 1646-2 | | | 10.1-15% | PRT (color) | <8 digits> | SYS | | 14 |
| 1646-3 | | | 15.1-20% | PRT (color) | <8 digits> | SYS | | 14 |
| 1646-4 | | | 20.1-25% | PRT (color) | <8 digits> | SYS | | 14 |
| 1646-5 | | | 25.1-30% | PRT (color) | <8 digits> | SYS | | 14 |
| 1646-6 | | | 30.1-40% | PRT (color) | <8 digits> | SYS | | 14 |
| 1646-7 | | | 40.1-60% | PRT (color) | <8 digits> | SYS | | 14 |
| 1646-8 | | | 60.1-80% | PRT (color) | <8 digits> | SYS | | 14 |
| 1646-9 | | | 80.1-100% | PRT (color) | <8 digits> | SYS | | 14 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|--|-----------|-------------|----------------------------|-----|--|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1647-0 | Pixel counter | Pixel count distribution/ full color (C) | 0-5% | PRT (color) | <8 digits> | SYS | The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distributions in the printer function, full color mode and toner C are displayed. [Unit: page] | 14 |
| 1647-1 | | | 5.1-10% | PRT (color) | <8 digits> | SYS | | 14 |
| 1647-2 | | | 10.1-15% | PRT (color) | <8 digits> | SYS | | 14 |
| 1647-3 | | | 15.1-20% | PRT (color) | <8 digits> | SYS | | 14 |
| 1647-4 | | | 20.1-25% | PRT (color) | <8 digits> | SYS | | 14 |
| 1647-5 | | | 25.1-30% | PRT (color) | <8 digits> | SYS | | 14 |
| 1647-6 | | | 30.1-40% | PRT (color) | <8 digits> | SYS | | 14 |
| 1647-7 | | | 40.1-60% | PRT (color) | <8 digits> | SYS | | 14 |
| 1647-8 | | | 60.1-80% | PRT (color) | <8 digits> | SYS | | 14 |
| 1647-9 | | | 80.1-100% | PRT (color) | <8 digits> | SYS | | 14 |
| 1648-0 | Pixel counter | Pixel count distribution/ full color (K) | 0-5% | PRT (color) | <8 digits> | SYS | The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distributions in the printer function, full color mode and toner K are displayed. [Unit: page] | 14 |
| 1648-1 | | | 5.1-10% | PRT (color) | <8 digits> | SYS | | 14 |
| 1648-2 | | | 10.1-15% | PRT (color) | <8 digits> | SYS | | 14 |
| 1648-3 | | | 15.1-20% | PRT (color) | <8 digits> | SYS | | 14 |
| 1648-4 | | | 20.1-25% | PRT (color) | <8 digits> | SYS | | 14 |
| 1648-5 | | | 25.1-30% | PRT (color) | <8 digits> | SYS | | 14 |
| 1648-6 | | | 30.1-40% | PRT (color) | <8 digits> | SYS | | 14 |
| 1648-7 | | | 40.1-60% | PRT (color) | <8 digits> | SYS | | 14 |
| 1648-8 | | | 60.1-80% | PRT (color) | <8 digits> | SYS | | 14 |
| 1648-9 | | | 80.1-100% | PRT (color) | <8 digits> | SYS | | 14 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|------------------------------------|-----------|----------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1649-0 | Pixel counter | Pixel count distribution/ black | 0-5% | PPC (black) | <8 digits> | SYS | The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distributions in the copy function and black mode are displayed. [Unit: page] | 14 |
| 1649-1 | | | 5.1-10% | PPC (black) | <8 digits> | SYS | | 14 |
| 1649-2 | | | 10.1-15% | PPC (black) | <8 digits> | SYS | | 14 |
| 1649-3 | | | 15.1-20% | PPC (black) | <8 digits> | SYS | | 14 |
| 1649-4 | | | 20.1-25% | PPC (black) | <8 digits> | SYS | | 14 |
| 1649-5 | | | 25.1-30% | PPC (black) | <8 digits> | SYS | | 14 |
| 1649-6 | | | 30.1-40% | PPC (black) | <8 digits> | SYS | | 14 |
| 1649-7 | | | 40.1-60% | PPC (black) | <8 digits> | SYS | | 14 |
| 1649-8 | | | 60.1-80% | PPC (black) | <8 digits> | SYS | | 14 |
| 1649-9 | | | 80.1-100% | PPC (black) | <8 digits> | SYS | | 14 |
| 1650-0 | Pixel counter | Pixel count distribution/ black | 0-5% | PRT (black) | <8 digits> | SYS | The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distributions in the printer function and black mode are displayed. [Unit: page] | 14 |
| 1650-1 | | | 5.1-10% | PRT (black) | <8 digits> | SYS | | 14 |
| 1650-2 | | | 10.1-15% | PRT (black) | <8 digits> | SYS | | 14 |
| 1650-3 | | | 15.1-20% | PRT (black) | <8 digits> | SYS | | 14 |
| 1650-4 | | | 20.1-25% | PRT (black) | <8 digits> | SYS | | 14 |
| 1650-5 | | | 25.1-30% | PRT (black) | <8 digits> | SYS | | 14 |
| 1650-6 | | | 30.1-40% | PRT (black) | <8 digits> | SYS | | 14 |
| 1650-7 | | | 40.1-60% | PRT (black) | <8 digits> | SYS | | 14 |
| 1650-8 | | | 60.1-80% | PRT (black) | <8 digits> | SYS | | 14 |
| 1650-9 | | | 80.1-100% | PRT (black) | <8 digits> | SYS | | 14 |

| Setting mode (08) | | | | | | | | |
|-------------------|----------------|------------------------------------|-----------|----------------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 1651-0 | Pixel counter | Pixel count distribution/ black | 0-5% | FAX (black) | <8 digits> | SYS | The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distributions in the FAX function and black mode are displayed. [Unit: page] | 14 |
| 1651-1 | | | 5.1-10% | FAX (black) | <8 digits> | SYS | | 14 |
| 1651-2 | | | 10.1-15% | FAX (black) | <8 digits> | SYS | | 14 |
| 1651-3 | | | 15.1-20% | FAX (black) | <8 digits> | SYS | | 14 |
| 1651-4 | | | 20.1-25% | FAX (black) | <8 digits> | SYS | | 14 |
| 1651-5 | | | 25.1-30% | FAX (black) | <8 digits> | SYS | | 14 |
| 1651-6 | | | 30.1-40% | FAX (black) | <8 digits> | SYS | | 14 |
| 1651-7 | | | 40.1-60% | FAX (black) | <8 digits> | SYS | | 14 |
| 1651-8 | | | 60.1-80% | FAX (black) | <8 digits> | SYS | | 14 |
| 1651-9 | | | 80.1-100% | FAX (black) | <8 digits> | SYS | | 14 |

<<PM support mode related code>>

- The management items at PM support mode can also be operated at setting mode (08).
The following items are displayed or set by using sub-codes at PM management setting in the table below.

<Sub-codes>

- 0: Present number of output pages
 - Means the present number of output pages.
- 1: Recommended number of output pages for replacement
 - Means the recommended number of output pages for replacement.
- 2: Number of output pages at the last replacement
 - Means the number of output pages at the last replacement.
- 3: Present driving counts
 - Means the present drive counts (1 count = 2 seconds).
- 4: Recommended driving counts to be replaced
 - Means the recommended drive counts for replacement (1 count = 2 seconds).
- 5: Driving counts at the last replacement
 - Means the drive counts at the last replacement.
- 6: Present output pages for control
 - Means the present number of output pages for controlling.
- 7: Present driving counts for control
 - Means the present drive counts for controlling (1 count = 2 seconds).
- 8: Number of times replaced
 - Counts up when clearing the counter of each unit in the PM Support Mode Screen.

Notes:

- Sub-code 0 is equivalent to sub-code 6.
- Sub-code 3 is equivalent to sub-code 7.
- When the value of sub-code 3 is changed, the value of sub-code 7 is also updated and vice versa.
- When "0" is set at one of sub-codes 0, 3, 6 and 7, the rest of them are automatically updated to "0".

| Items | PM management setting <Procedure 4> *Indicated in 8 digits | Date of previous replacement <Procedure 2> | Remarks |
|--------------------------------|---|---|--|
| Photoconductive drum | 1150-0 to 8 | 1151 | <Default values of code 1150 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 130,000/160,000/200,000 Sub-code 4: 315,000/315,000/315,000 |
| Drum cleaning blade | 1158-0 to 8 | 1159 | <Default values of code 1158 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 130,000/160,000/200,000 Sub-code 4: 315,000/315,000/315,000 |
| Drum cleaning brush | 1166-0 to 8 | 1167 | <Default values of code 1166 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 130,000/160,000/200,000 Sub-code 4: 315,000/315,000/315,000 |
| Main charger grid | 1174-0 to 8 | 1175 | <Default values of code 1174 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 130,000/160,000/200,000 Sub-code 4: 315,000/315,000/315,000 |
| Main charger wire | 1182-0 to 8 | 1183 | <Default values of code 1182 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 130,000/160,000/200,000 Sub-code 4: 315,000/315,000/315,000 |
| Main charger wire cleaning pad | 1190-0 to 8 | 1191 | <Default values of code 1190 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 130,000/160,000/200,000 Sub-code 4: 315,000/315,000/315,000 |
| Ozone filter | 1198-0 to 8 | 1199 | <Default values of code 1198 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 130,000/160,000/200,000 Sub-code 4: 315,000/315,000/315,000 |
| Developer material | 1200-0 to 8 | 1201 | <Default values of code 1200 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 100,000/120,000/150,000 Sub-code 4: 116,000/116,000/116,000 |

| Items | PM management setting <Procedure 4> *Indicated in 8 digits | Date of previous replacement <Procedure 2> | Remarks |
|------------------------------|---|---|---|
| Developer material Y | 1202-0 to 8 | 1203 | <Default values of code 1202 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 24,000/30,000/37,500 Sub-code 4: 28,000/28,000/28,000 |
| Developer material M | 1204-0 to 8 | 1205 | <Default values of code 1204 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 24,000/30,000/37,500 Sub-code 4: 28,000/28,000/28,000 |
| Developer material C | 1206-0 to 8 | 1207 | <Default values of code 1206 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 24,000/30,000/37,500 Sub-code 4: 28,000/28,000/28,000 |
| 1st transfer roller | 1214-0 to 8 | 1215 | <Default values of code 1214 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 390,000/480,000/ 600,000 Sub-code 4: 1010,000/1010,000/ 1010,000 |
| Transfer belt | 1228-0 to 8 | 1229 | <Default values of code 1228 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 390,000/480,000/ 600,000 Sub-code 4: 1010,000/1010,000/ 1010,000 |
| Transfer belt cleaning blade | 1232-0 to 8 | 1233 | <Default values of code 1232 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 130,000/160,000/ 200,000 Sub-code 4: 337,000/337,000/ 337,000 |
| 2nd transfer roller | 1240-0 to 8 | 1241 | <Default values of code 1240 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 300,000/360,000/ 450,000 Sub-code 4: 468,000/468,000/ 468,000 |
| Pressure roller | 1250-0 to 8 | 1251 | <Default values of code 1250 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 100,000/120,000/ 150,000 Sub-code 4: 285,000/285,000/ 285,000 |
| Oil roller | 1258-0 to 8 | 1259 | <Default values of code 1258 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 100,000/120,000/ 150,000 Sub-code 4: 285,000/285,000/ 285,000 |

| Items | PM management setting <Procedure 4> *Indicated in 8 digits | Date of previous replacement <Procedure 2> | Remarks |
|-----------------------------------|---|---|--|
| Cleaning roller | 1260-0 to 8 | 1261 | <Default values of code 1260 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 100,000/120,000/150,000 Sub-code 4: 285,000/285,000/285,000 |
| Pressure roller separation finger | 1270-0 to 8 | 1271 | <Default values of code 1270 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 100,000/120,000/150,000 Sub-code 4: 285,000/285,000/285,000 |
| Fuser belt | 1272-0 to 8 | 1273 | <Default values of code 1272 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 100,000/120,000/150,000 Sub-code 4: 285,000/285,000/285,000 |
| Fuser belt guide | 1276-0 to 8 | 1277 | <Default values of code 1276 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 100,000/120,000/150,000 Sub-code 4: 285,000/285,000/285,000 |
| Pickup roller (RADF) | 1282-0, 1, 2, 8 | 1283 | <Default values of code 1282 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 120,000/120,000/120,000 |
| Feed roller (RADF) | 1284-0,1,2,8 | 1285 | <Default values of code 1284 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 120,000/120,000/120,000 |
| Separation roller (RADF) | 1286-0, 1, 2, 8 | 1287 | <Default values of code 1286 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 120,000/120,000/120,000 |
| Pickup roller (Upper drawer) | 1290-0, 1, 2, 8 | 1291 | <Default values of code 1290 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Pickup roller (Lower drawer) | 1292-0,1,2,8 | 1293 | <Default values of code 1292 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Pickup roller (LCF) | 1294-0,1,2,8 | 1295 | <Default values of code 1294 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 160,000/160,000/160,000 |

| Items | PM management setting <Procedure 4> *Indicated in 8 digits | Date of previous replacement <Procedure 2> | Remarks |
|---|---|---|--|
| Feed roller (Upper drawer) | 1298-0,1,2,8 | 1299 | <Default values of code 1298 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Feed roller (Lower drawer) | 1300-0,1,2,8 | 1301 | <Default values of code 1300 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Feed roller (LCF) | 1302-0, 1, 2, 8 | 1303 | <Default values of code 1302 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 160,000/160,000/ 160,000 |
| Separation roller (Upper drawer) | 1306-0,1,2,8 | 1307 | <Default values of code 1306 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Separation roller (Lower drawer) | 1308-0,1,2,8 | 1309 | <Default values of code 1308 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Separation roller (LCF) | 1310-0,1,2,8 | 1311 | <Default values of code 1310 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 160,000/160,000/ 160,000 |
| Separation roller (PFP upper drawer) | 1312-0,1,2,8 | 1313 | <Default values of code 1312 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Separation roller (PFP lower drawer) | 1314-0,1,2,8 | 1315 | <Default values of code 1314 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Separation roller (Bypass unit) | 1316-0,1,2,8 | 1317 | <Default values of code 1316 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Feed roller (PFP upper drawer) | 1320-0,1,2,8 | 1321 | <Default values of code 1320 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Feed roller (PFP lower drawer) | 1322-0,1,2,8 | 1323 | <Default values of code 1322 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Feed roller (Bypass unit) | 1324-0,1,2,8 | 1325 | <Default values of code 1324 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Pickup roller (PFP upper drawer) | 1328-0,1,2,8 | 1329 | <Default values of code 1328 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |

| Items | PM management setting <Procedure 4> *Indicated in 8 digits | Date of previous replacement <Procedure 2> | Remarks |
|----------------------------------|---|--|--|
| Pickup roller (PFP lower drawer) | 1330-0,1,2,8 | 1331 | <Default values of code 1330 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Pickup roller (Bypass unit) | 1332-0, 1, 2, 8 | 1333 | <Default values of code 1332 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000 |
| Pressure roller discharge brush | 1838-0 to 8 | 1839 | <Default values of code 1838 (e-STUDIO281c/351c/451c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 100,000/120,000/150,000 Sub-code 4: 285,000/285,000/285,000 |

<<Procedure to copy the total counter value (08-257)>>

- (1) Turn ON the power while [0] and [8] are pressed simultaneously.
- (2) Key in the code "257" with the digital keys and press the [START] button (the following is displayed).

Note:

Before performing the following operations, note the current counter values.

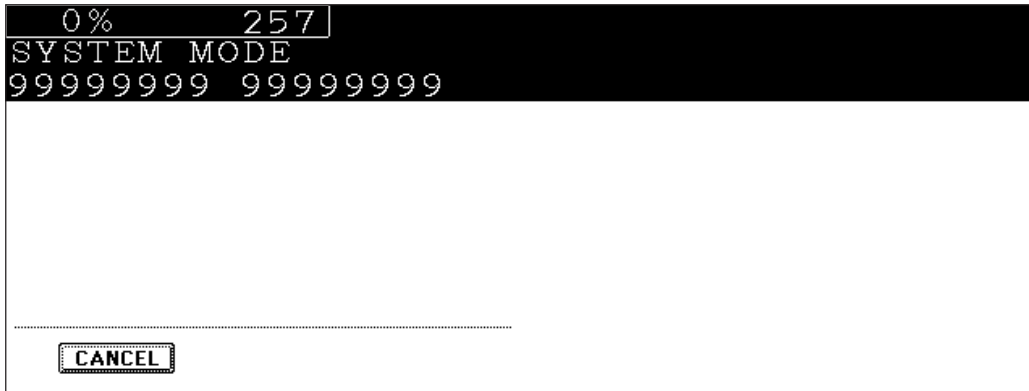


Fig.2-3

- (3) Key in the value "1" or "2" and press the [START] button.
The value entered is displayed on the left of the "%", and the [ENTER] button is displayed.

Note:

The value can be erased by pressing the [CLEAR] button to change as long as the [START] button is not pressed. (The value on the left of the "%" is reset to "0" by pressing the [CLEAR] button.)

- Key in "1" to copy the value of the total counter (LGC board) (A) onto the value of the backup counter (SYS board) (B).

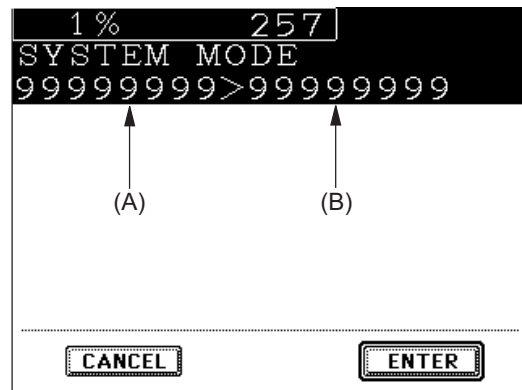


Fig.2-4

- Key in "2" to copy the value of the backup counter (SYS board) (B) onto the value of the total counter (LGC board) (A).

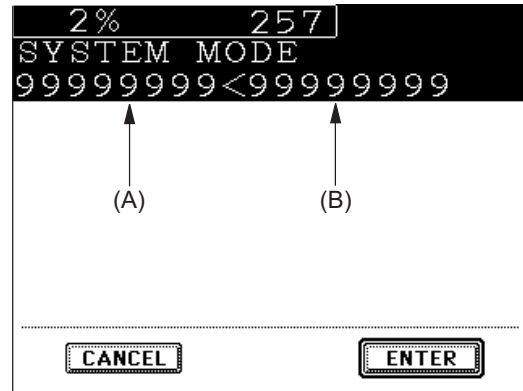


Fig.2-5

- (4) Press the [ENTER] button to complete overwriting of the counter value.

Note:

The screen returns to the code entry screen without copying (overwriting) the value when the [CANCEL] button is pressed.

2.2.6 Pixel counter

1) Outline

Pixel counter is a function that counts the number of dots emitted by the laser and converts it into the print ratio (%) per standard paper size. This "Print ratio (%) per standard paper size" is called Pixel count (%).

This function enables you to know how each user uses the equipment and to grasp the tendency of toner consumption (number of output pages per cartridge).

2) Factors affecting toner consumption

Standard number of output pages per cartridge shows the average number of output pages under the condition that the data of print ratio 6% is printed on the standard paper size (A4/LT) at a normal temperature and humidity.

However, users do not always print under the above condition. As for the type of original, copy/print mode and environment, each user has different tendency, and as a result, the number of output pages per cartridge becomes different depending on the user.

The major factors affecting toner consumption are as follows:

- Original/Data coverage
- Original/Data density
- Original/Print mode
- Density setting

Also there are other factors in addition to the above, such as environment, individual difference of equipment, difference in lot quality of materials, toner density and drum surface potential.

The general relations between the above 4 factors and toner consumption per output page in the copy function are as follows:

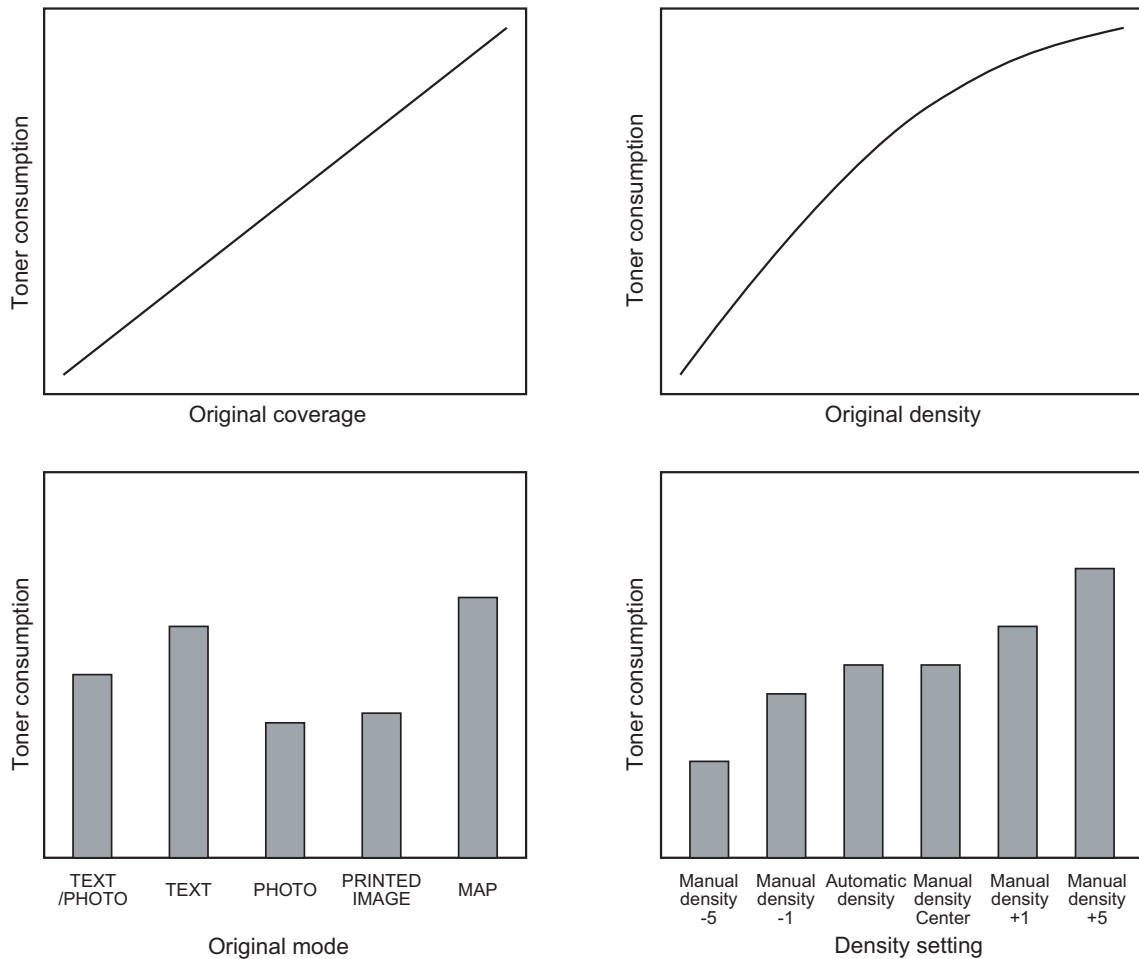


Fig.2-6 Factors affecting toner consumption and the tendency

3) Details of pixel counter

- Toner cartridge reference and service technician reference

The pixel counter function in this equipment has 2 references, toner cartridge reference and service technician reference.

Toner cartridge reference

This is a system that accumulates data between the installation of a new toner cartridge and next installation.

The installation of new toner cartridge is judged when the total number of pixel count or output pages after the detection of toner cartridge empty has exceeded the threshold.

The threshold to be used is selectable in the setting mode (08-1506) between the pixel count and output pages (0: Output pages 1: Pixel counter). The threshold of pixel count is set in the setting mode (08-1508) and that of output pages is set in the setting mode (08-1507). When the new toner cartridge is judged as installed, the data related with the previous cartridge is cleared and replaced with the data after the installation of new cartridge. Clearing of the counter of the toner cartridge reference is performed in the setting mode (08-1503).

Service technician reference

This is a system that accumulates data between clearing the counter of the service technician reference by service technician and subsequently clearing the same counter. Clearing of the counter of the service technician reference is performed in the setting mode (08-1502).

- Print count (number of output pages)
The number of output pages shown at the pixel counter is counted after converting all paper sizes to the standard paper size (A4/LT). Printing on other than the standard size is converted by paper area ratio. The standard paper size is set in the setting mode (08-1500). The examples of conversion are as follows:

Ex.)

"1" is added to the print count when printing on A4/LT size.

"2" is added to the print count when printing on A3/LD size. (area ratio to A4/LT: 200%)

"1.49" is added to the print count when printing on B4 size. (area ratio to A4: 149%)

"1.27" is added to the print count when printing on LG size. (area ratio to LT: 127%)

- Pixel count (%)
Pixel count (%) shows the ratio of laser emitting pixels to all pixels on standard paper. The examples of pixel count are as follows:

Note:

In the following examples, 'solid copy' is considered to be 100%. But since the image has 4 margins, it never becomes 100% actually.

Ex.)

Printing 5 pages on A4/LT size with solid copy (Laser emits to all pixels.)

→ Pixel count: 100%, Print count: 5

Printing 5 pages on A4/LT size with blank copy (Laser never emits.)

→ Pixel count: 0%, Print count: 5

Printing 2 pages on A4/LT size with solid copy (Laser emits to all pixels.)

Printing 2 pages on A4/LT size with blank copy (Laser never emits.)

→ Pixel count: 50%, Print count: 4

Printing 3 pages on A4/LT size with 6% of laser emission

Printing 1 page on A4/LT size with 2% of laser emission

→ Pixel count: 5%, Print count: 4

Printing 2 pages on A3/LD size with solid copy (Laser emits to all pixels.)

→ Pixel count: 100%, Print count: 4

Printing 2 pages on A3/LD size with 6% of laser emission

→ Pixel count: 6%, Print count: 4

- Average pixel count (%) and latest pixel count (%)
There are 2 types of the value calculated as the pixel count, average pixel count (%) and latest pixel count (%).

Average pixel count (%)

The average value of all pixel count data after each reference data is cleared is calculated and displayed.

Latest pixel count (%)

The value is displayed for printing just before the pixel counter is confirmed.

- Type of calculated data
Since this is multifunctional and color equipment, the data of pixel count is calculated for each function and color.
The following list is the information that can be confirmed by LCD screen. But actually, more information can be confirmed by the setting mode (08).
See after-mentioned "5)-Display in the setting mode (08)" for details.

○: With data
—: Without data

| | Toner cartridge reference | | | | Service technician reference | | | | | |
|------------------|---------------------------|---------|------|-------|------------------------------|--------|---------|------|-------|-------|
| | Yellow | Magenta | Cyan | Black | Full color/Twin color | | | | | Black |
| | | | | | Total | Yellow | Magenta | Cyan | Black | |
| Copier function | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Printer function | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| FAX function | - | - | - | ○ | - | - | - | - | - | ○ |
| Total | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Table 2-201 Type of calculated data

- Setting related with the pixel counter function

Standard paper size setting

The standard paper size (A4 or LT) to convert it into the pixel count is selected (08-1500).

Pixel counter display setting

Whether or not to display the pixel counter on the LCD screen is selected (08-1504).

Display reference setting

The reference when displaying the pixel counter on the LCD screen (toner cartridge reference or service technician reference) is selected (08-1505).

Determination counter of toner empty

This is the counter to determine the replacement of new toner cartridge after the toner empty is detected.

After the toner empty is detected by the auto-toner sensor, this counter checks if toner empty is not detected one more time while the specified number of pixel count or output pages is counted.

Pixel counter clearing

There are 3 types for the pixel count clear as follows:

08-1501: All information related to the pixel count is cleared.

08-1502: All information related to the service technician reference pixel count is cleared.

08-1503: All information related to the toner cartridge reference pixel count is cleared.

4) Relation between pixel count and toner consumption

The user's printing out the image with large coverage or high density may cause the large value of pixel count. And the setting that toner consumption becomes high in the original mode or density setting may cause it as well.

In this case, the replacement cycle of toner cartridge is faster than the standard number of output pages. Therefore, this trend needs to be grasped for the service.

The relation between pixel count and number of output pages per cartridge is as follows:

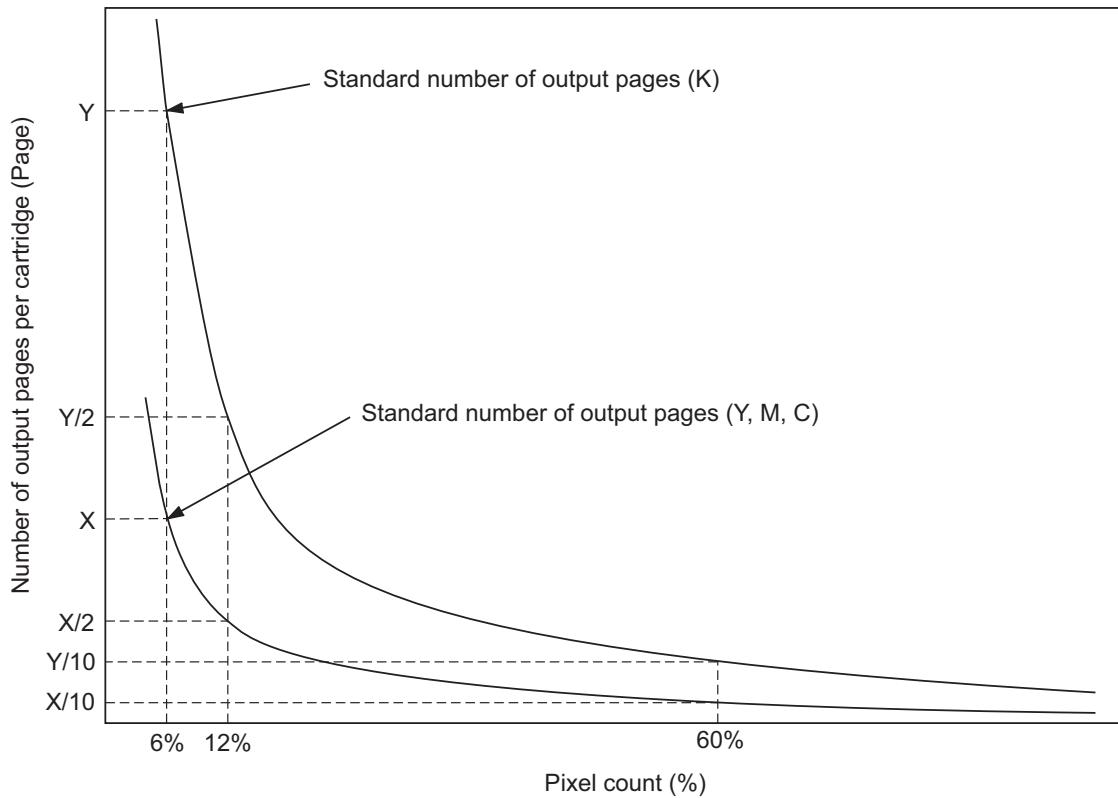


Fig.2-7 Pixel count and number of output pages per cartridge

5) Pixel counter confirmation

- Display on LCD screen

Whether or not to display the pixel counter on the LCD screen is selected (0: Displayed, 1: Not displayed) in the setting mode (08-1504), and whether or not to display it at the service technician reference or toner cartridge reference is selected (0: Service technician reference, 1: Toner cartridge reference) in the setting mode (08-1505).

The following screen is displayed when the buttons, [USER FUNCTIONS], [COUNTER] and [PIXEL COUNTER] are pressed in this order after “Displayed” is selected with the code above and the power is, as usual, turned ON. (The displayed buttons are depending on the setting of 08-1505.)

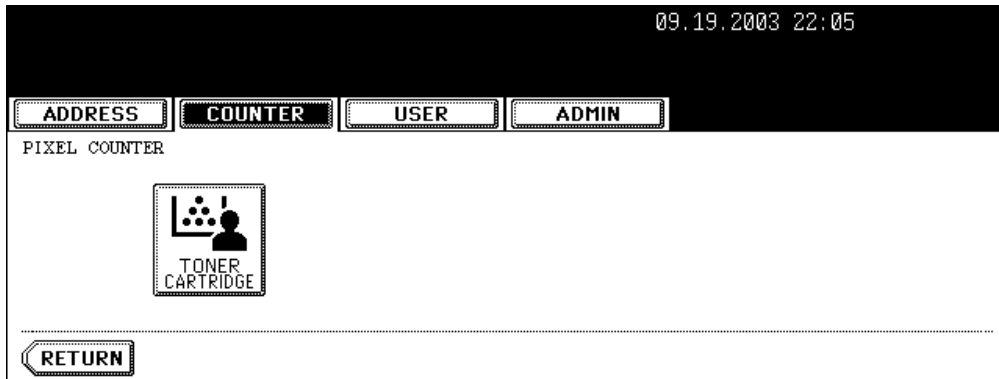


Fig.2-8

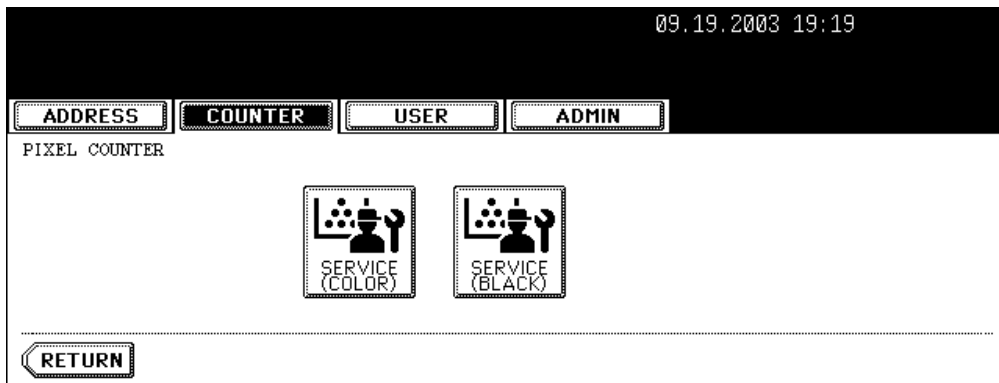


Fig.2-9 Reference selection screen

When selecting and pressing the button in the above screen, each pixel counter screen is displayed.

[TONER CARTRIDGE] button: Information screen of toner cartridge reference is displayed.

[SERVICE (COLOR)] button: Information screen of service technician reference (full color) is displayed.

[SERVICE (BLACK)] button: Information screen of service technician reference (black) is displayed.

The following screen is displayed when pressing the [TONER CARTRIDGE] button.

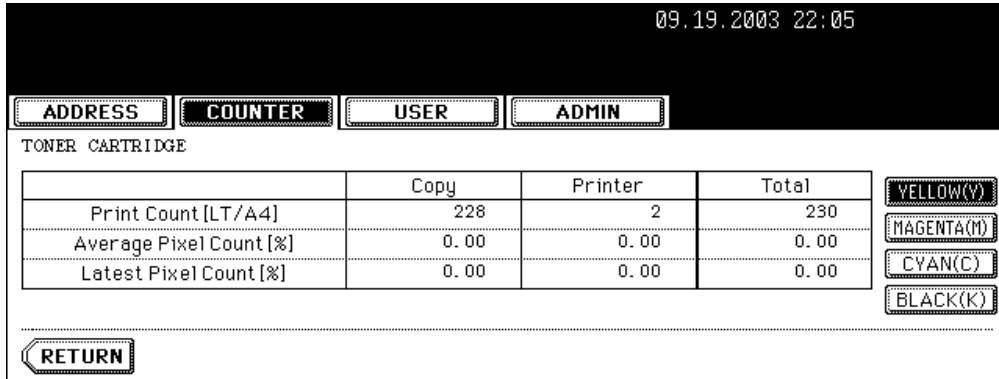


Fig.2-10 Information screen of toner cartridge reference

The following screen is displayed when pressing the [SERVICE (COLOR)] button.

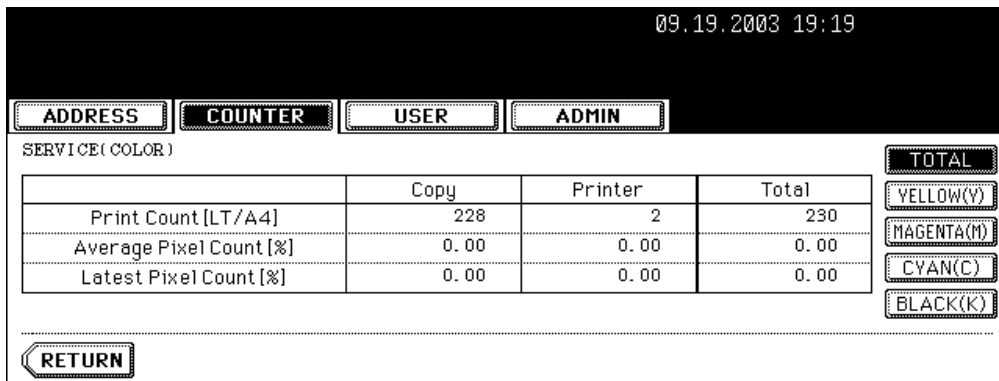


Fig.2-11 Information screen of service technician reference (full color)

The following screen is displayed when pressing the [SERVICE (BLACK)] button.

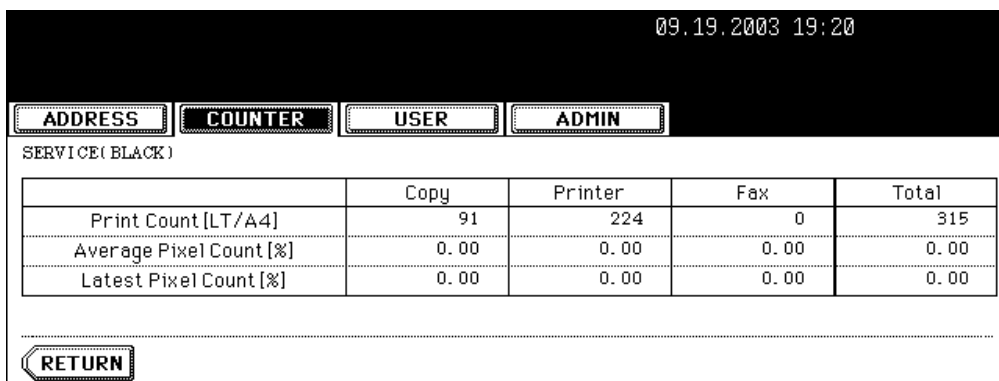


Fig.2-12 Information screen of service technician reference (black)

- Data list printing

The data for pixel counter can be printed in the list print mode (9S).

9S-104: The data of the toner cartridge reference is printed.


9S-105: The data of service technician reference is printed.

| PIXEL COUNTER CODE LIST | | | | | | | |
|-------------------------|----------|------|-------------------------|-------|-------|-------|-------|
| 2005.6.14 09:55 | | | | | | | |
| SERVICEMAN | | | | | | | |
| No | DATE | Col. | | PPC | PRN | FAX | TOTAL |
| 0 | 20050614 | Y | Print Count [LT/A4] | 12345 | 23456 | --- | 45678 |
| 1 | 20050614 | Y | Average Pixel Count [%] | 12345 | 23456 | --- | 45678 |
| 2 | 20050614 | Y | Latest Pixel Count [%] | 12345 | 23456 | --- | 45678 |
| | | | | | | | |
| 9 | 20050614 | K | Print Count [LT/A4] | 12345 | 23456 | 12345 | 45678 |
| 10 | 20050614 | K | Average Pixel Count [%] | 12345 | 23456 | 12345 | 45678 |
| 11 | 20050614 | K | Latest Pixel Count [%] | 12345 | 23456 | 12345 | 45678 |

Fig.2-13 Data list of toner cartridge reference

| PIXEL COUNTER CODE LIST | | | | | | | |
|-------------------------|----------|------|-------------------------|-------|-------|-------|-------|
| 2005.6.14 09:55 | | | | | | | |
| TONERCARTRIDGE | | | | | | | |
| No | DATE | Col. | | PPC | PRN | FAX | TOTAL |
| 0 | 20050614 | Y | Print Count [LT/A4] | 12345 | 23456 | --- | 45678 |
| 1 | 20050614 | Y | Average Pixel Count [%] | 12345 | 23456 | --- | 45678 |
| 2 | 20050614 | Y | Latest Pixel Count [%] | 12345 | 23456 | --- | 45678 |
| | | | | | | | |
| 9 | 20050614 | K | Print Count [LT/A4] | 12345 | 23456 | 12345 | 45678 |
| 10 | 20050614 | K | Average Pixel Count [%] | 12345 | 23456 | 12345 | 45678 |
| 11 | 20050614 | K | Latest Pixel Count [%] | 12345 | 23456 | 12345 | 45678 |

Fig.2-14 Data list of service technician reference

- Display in the setting mode (08)
Information of pixel count can be also checked in the setting mode (08).
For details, see  P.2-85 "2.2.5 Setting mode (08)".

Print count, pixel count

| | | Full color/Twin color | | | | Black | Black (at color) + Black |
|------------------|-------------------------|-----------------------|---------|------|-------|-------|--------------------------|
| | | Yellow | Magenta | Cyan | Black | | |
| Copier function | Print count (page) | 1557 | 1559 | 1561 | 1552 | 1553 | - |
| | Average pixel count (%) | 1609 | 1610 | 1611 | 1612 | 1613 | 1614 |
| | Latest pixel count (%) | 1626 | 1627 | 1628 | 1629 | 1639 | - |
| Printer function | Print count (page) | 1558 | 1560 | 1562 | 1554 | 1555 | - |
| | Average pixel count (%) | 1615 | 1616 | 1617 | 1618 | 1619 | 1620 |
| | Latest pixel count (%) | 1630 | 1631 | 1632 | 1633 | 1640 | - |
| FAX function | Print count (page) | - | - | - | - | 1556 | - |
| | Average pixel count (%) | - | - | - | - | 1625 | - |
| | Latest pixel count (%) | - | - | - | - | 1634 | - |
| Total | Average pixel count (%) | 1621 | 1622 | 1623 | - | - | 1624 |

Table 2-202 Pixel count code table (toner cartridge reference)

| | | Full color/Twin color | | | | | Black |
|------------------|-------------------------|-----------------------|--------|---------|------|-------|-------|
| | | Total | Yellow | Magenta | Cyan | Black | |
| Copier function | Print count (page) | 1547 | - | - | - | - | 1548 |
| | Average pixel count (%) | 1577 | 1578 | 1579 | 1580 | 1581 | 1592 |
| | Latest pixel count (%) | 1596 | 1597 | 1598 | 1599 | 1600 | 1606 |
| Printer function | Print count (page) | 1549 | - | - | - | - | 1550 |
| | Average pixel count (%) | 1582 | 1583 | 1584 | 1585 | 1586 | 1593 |
| | Latest pixel count (%) | 1601 | 1602 | 1603 | 1604 | 1605 | 1607 |
| FAX function | Print count (page) | - | - | - | - | - | 1551 |
| | Average pixel count (%) | - | - | - | - | - | 1594 |
| | Latest pixel count (%) | - | - | - | - | - | 1608 |
| Total | Average pixel count (%) | 1587 | 1588 | 1598 | 1590 | 1591 | 1595 |

Table 2-203 Pixel count code table (service technician reference)

Pixel count distribution

| | | Full color/Twin color | | | | Black |
|------------------|---------------------------------|-----------------------|---------|------|-------|-------|
| | | Yellow | Magenta | Cyan | Black | |
| Copier function | Print count distribution (page) | 1641 | 1642 | 1643 | 1644 | 1549 |
| Printer function | Print count distribution (page) | 1645 | 1646 | 1647 | 1648 | 1650 |
| FAX function | Print count distribution (page) | - | - | - | - | 1651 |

Table 2-204 Pixel count code table

Note:

By entering the sub code at the above code, the pixel count distribution can be displayed dividing into 10 ranges. The sub codes are as follows.

- 0: 0 - 5% 1: 5.1 - 10% 2: 10.1 - 15% 3: 15.1 - 20% 4: 20.1 - 25%
 5: 25.1 - 30% 6: 30.1 - 40% 7: 40.1 - 60% 8: 60.1 - 80% 9: 80.1 - 100%

Other information

Toner cartridge replacement counter.

The toner cartridge replacement count is displayed.

- 08-1563: Toner cartridge Y
- 08-1564: Toner cartridge M
- 08-1565: Toner cartridge C
- 08-1566: Toner cartridge K

Toner cartridge reference count started date

The toner cartridge reference count started date is displayed.

- 08-1515: Toner cartridge Y
- 05-1516: Toner cartridge M
- 08-1517: Toner cartridge C
- 05-1518: Toner cartridge K

Service technician reference cleared date

The service technician reference cleared date (08-1510) is displayed.

The date (08-1502 was performed) is stored.

Toner cartridge reference cleared date

The toner cartridge reference cleared date is displayed.

The date (08-1503 was performed) is stored.

- 08-1511: Toner cartridge Y
- 05-1512: Toner cartridge M
- 08-1513: Toner cartridge C
- 05-1514: Toner cartridge K

2.2.7 Classification List of Adjustment Mode (05) / Setting Mode (08)

| Classification | Adjustment Mode (05) | Setting Mode (08) |
|----------------|----------------------|--|
| User interface | | [AMS] 605 [X in 1] 650 [Color specification] 643, 644 [Indicator] 671 [Edit copying] 645, 646 [Sound] 610, 969, 970 [Counter] 202 [Cascade] 652, 653 [ACS] 268 [Screen] 207, 602 [Administrator] 263 [Feeding setting] 658, 659 [Language] 220, 221 [Original counter] 302 [Original direction] 628 [Copy volume] 300 [Automatic calibration] 632 [Default setting] 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 289, 331, 503, 585, 587, 588, 603, 604, 607, 618, 642, 1479 [Offsetting between jobs] 682 [Security level] 1708 [Sorting] 627, 634, 641, 649 [Timer] 204, 205, 206 [Template] 1140 [Image shift] 636, 1429, 1430 [Tray reset] 648 [Date] 640 [Annotation] 651, 657 [Displaying number] 342 |

| Classification | Adjustment Mode (05) | Setting Mode (08) |
|----------------|---|--|
| User interface | | [Job Build] 1130, 1131 [File] 209, 218, 219 [Department management] 617, 620, 621, 622, 623, 624, 629 [Black-free] 343 [Book duplexing] 611 [Box printing] 951, 953, 954 [Paper size] 613 [Blank copy prevention] 625 |
| Scanner | [Log table] 361, 362 [Image position] 305, 306 [Carriage position] 359, 360 [Fixed value] 363, 364 [Shading position] 350, 351 [Distortion] 308 [Reproduction ratio] 340 | [E-mail] 272, 273 |
| Fax | | [Function] 1498, 1926 [Destination] 701 [Default setting] 274 [Priority drawer] 689 |

| Classification | Adjustment Mode (05) | Setting Mode (08) |
|----------------|---|---|
| Image | [Binarization] 700, 701, 702 [ACS] 1065, 1066, 1675, 1676 [RGB] 1080, 1081, 1082 [Color deviation correction] 417-0 to 3, 418-0 to 3, 953-0 to 3, 954-0 to 3, 955-0 to 3, 956-0 to 3 [Image density] 501, 503, 504, 505, 506, 507, 508, 509, 510, 512, 514, 515, 710, 714, 715, 719, 720, 724, 725, 729, 845, 846, 847, 850, 851, 852, 855, 856, 857, 860, 861, 862, 1550, 1551, 1552, 1553, 1554, 1560, 1561, 1562, 1563, 1564, 1570, 1571, 1572, 1573, 1574, 1580, 1581, 1582, 1583, 1584 [Pixel size] 663 [Color balance] 1010-0 to 2, 1011-0 to 2, 1012-0 to 2, 1013-0 to 2, 1014-0 to 2, 1015-0 to 2, 1016-0 to 2, 1017-0 to 2, 1018-0 to 2, 1019-0 to 2, 1020-0 to 2, 1021-0 to 2, 1022-0 to 2, 1023-0 to 2, 1024-0 to 2, 1025-0 to 2, 1026-0 to 2, 1027-0 to 2, 1028-0 to 2, 1029-0 to 2, 1030-0 to 2, 1031-0 to 2, 1032-0 to 2, 1033-0 to 2, 1034-0 to 2, 1035-0 to 2, 1036-0 to 2, 1037-0 to 2, 1038-0 to 2, 1039-0 to 2, 1040-0 to 2, 1041-0 to 2, 1779-0 to 2, 1780-0 to 2, 1781-0 to 2, 1782-0 to 2, 1783-0 to 2, 1784-0 to 2, 1785-0 to 2, 1786-0 to 2, 1787-0 to 2, 1788-0 to 2, 1789-0 to 2, 1790-0 to 2, 1791-0 to 2, 1792-0 to 2, 1793-0 to 2, 1794-0 to 2, 1795-0 to 2, 1796-0 to 2, 1797-0 to 2, 1798-0 to 2 [Gamma adjustment] 580, 1000, 1001, 1002, 1003, 1642, 1643 [Gamma balance] 590-0 to 2, 591-0 to 2, 592-0 to 2, 596-0 to 2, 597-0 to 2, 598-0 to 2, 599-0 to 2, 880-0 to 2, 881-0 to 2, 882-0 to 2, 883-0 to 2 [Highlight pen] 1769, 1770, 1771, 1772 [Reproduction level adjustment] 1725 [Maximum text density] 1630, 1631, 1632, 1633 [Background/Black density] 1075, 1076, 1077 [Background processing] 600, 601, 602, 848, 853, 858, 1070, 1071, 1072, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1708, 1709, 1710, 1711, 1712 [Sharpness] 604, 605, 606, 667-0 to 4, 840, 841, 842, 843, 1086, 1087, 1088, 1737, 1738, 1739, 1740, 1741, 1757 | [ACS] 609-0 to 4 [Image quality] 586, 589 [Gamma correction] 597 [Error diffusion / Dither] 502 [Automatic calibration] 595 [Default setting] 550 [Smoothing] 561, 562 |

| Classification | Adjustment Mode (05) | Setting Mode (08) |
|----------------|---|--|
| Image | [Smudged/faint text] 648, 654, 655 [Black reproduction switching] 1761 [Toner saving] 664, 665, 1055, 1056, 1057, 1058 [Toner amount] 1046-0 to 1, 1047-0 to 1, 1048-0 to 1, 1049-0 to 1, 1050-0 to 1, 1612, 1613, 1614, 1615, 1616 [Reproduction ratio] 884, 1060 [Margin] 430, 431, 432, 433, 434-0 to 1, 435, 436, 437, 438, 439 [Range correction] 532, 533, 534, 570, 571, 572, 693, 694, 695, 825, 826, 827, 828, 830, 831, 832, 833, 835, 836, 837, 838 | |
| Image control | [Temperature/Humidity] 393 [Color/Black developer] 338, 339, 372, 373, 386-0 to 3 [Contrast voltage] 330-0 to 3, 332-0 to 3, 380-0 to 3, 381-0 to 3, 1800-0 to 3, 1801-0 to 3, 1811-0 to 3, 1812-0 to 3, 1815-0 to 3 [Performing] 394, 395, 396, 398-0 to 3 [Sensor] 388, 389, 391-0 to 3, 390-0 to 3, 392 [Main charger] 334, 335, 385-0 to 3, 1805-0 to 3, 1806-0 to 3, 1807-0 to 3, 1808-0 to 3, 1809-0 to 3, 1810-0 to 3 [Background voltage] 1804-0 to 3, 1813-0 to 3, 1814-0 to 3 [Laser power] 331-0 to 3, 333-0 to 3, 382-0 to 3, 383-0 to 3, 384-0 to 3, 1802-0 to 3, 1803-0 to 3, 1816-0 to 3, 1817, 1819, 1820, 1821 | [2nd transfer] 544, 545, 546, 548 [Abnormality detection] 573, 574, 575, 576 [Contrast voltage] 554, 556, 558 [Automatic starting] 559, 565, 566, 567, 568, 569, 570, 571, 572 [Smoothing] 560 [Setting] 549, 551 [Drum] 552, 553 [Laser power] 555, 557 |
| Drive system | [Exit motor] 424, 425 [Transport motor] 426, 427 [Main motor] 421, 422 | |

| Classification | Adjustment Mode (05) | Setting Mode (08) |
|----------------|---|---|
| Feeding system | [Aligning amount] 448-0 to 3, 449-0 to 3, 450-0 to 3, 452-0 to 3, 455-0 to 2, 457, 458-0 to 2, 460-0 to 2, 461-0 to 2, 462-0 to 3, 463-0 to 2, 469-0 to 3, 470-0 to 3, 471-0 to 3, 472-0 to 3, 473, 474-0 to 2, 475-0 to 9 [Paper pushing amount] 466-0 to 7, 467 | [Feeding setting] 254, 255, 619 [Paper source] 480, 481, 1135, 1431 [detection] 449, 1492 [Setting] 988 [Coated paper Mode] 675-0 to 4, 676, 677-0 to 5 [Paper size] 224, 225, 226, 227, 228, 256 [Paper type] 697 [Paper dimension] 210, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 470, 471 [Paper retry] 463-0 to 1, 464-0 to 1, 465-0 to 1, 466-0 to 1, 467-0 to 1, 468-0 to 1, 482, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401 |
| Laser | [Write start] 410, 411, 440, 441, 442, 443, 444, 445, 494, 495, 496, 498-0 to 1 [Polygonal motor] 401, 405 [Sideways deviation] 497-0 to 5 | [Polygonal motor] 398, 399, 478, 479, 483, 484, 485, 486, 488, 489, 490 |
| Main charger | [Grid] 241, 242, 243, 244 | [Cleaning] 511, 1389 |
| Developer | [Auto-toner] 200, 201, 202, 203, 204, 206 [Color auto-toner] 207, 208 [Timing adjustment] 499 | [Color auto-toner] 819-0 to 2, 820-0 to 2, 823-0 to 2, 824-0 to 2, 858-0 to 2, 859-0 to 2, 860-0 to 1, 861-0 to 1, 862-0 to 1, 863-0 to 1, 864, 865, 866-0 to 1, 867, 868, 869, 870, 871, 872, 873-0 to 2, 874, 875-0 to 2, 876-0 to 2, 877-0 to 2, 878-0 to 2, 879-0 to 2, 880-0 to 2, 881-0 to 2, 1414, 1800-0 to 2, 1801 [Stabilization] 821, 822-0 to 2, 1802-0 to 2 [Toner nearly empty] 1415, 1416 |

| Classification | Adjustment Mode (05) | Setting Mode (08) |
|------------------|---|---|
| Transfer | [1st transfer] 210, 245, 250, 251, 281, 1829-0 to 2, 1831, 1832, 1833, 1836, 1847, 1848, 1849, 1850-0 to 3, 1861, 1862-0 to 3, 1863, 1864 [2nd transfer] 224, 225, 226, 227-0 to 3, 229-0 to 3, 230-0 to 1, 231-0 to 1, 232-0 to 1, 234-0 to 3, 236-0 to 3, 237-0 to 1, 238-0 to 1, 239-0 to 1, 252, 253, 254, 255, 275, 276, 277-0 to 3, 279-0 to 3, 290-0 to 1, 291-0 to 1, 292-0 to 1, 293-0 to 4, 294-0 to 3, 296-0 to 3, 297-0 to 1, 298-0 to 1, 299-0 to 1, 1822-0 to 4, 1823-0 to 3, 1825-0 to 3, 1826-0 to 1, 1827-0 to 1, 1828-0 to 1, 1839-0 to 1, 1840-0 to 1, 1841-0 to 1, 1842-0 to 3, 1845-0 to 1 [Cleaning] 284, 285 [Temperature/humidity] 247, 248, 270 | [1st transfer] 816 [2nd transfer] 487, 817 [Temperature correction] 818 |
| Fuser | | [Temperature] 409, 411, 410-0 to 1, 412-0 to 1, 413-0 to 1, 416, 422, 436, 437-0 to 1, 438-0 to 1, 458, 460 [Time] 415-0 to 1, 428-0 to 1, 459 [Status counter] 400 [TWD and SAD models] 849 [Transport speed] 430, 431, 432 [Pre-running] 417-0 to 1, 439-0 to 1, 440-0 to 1, 441-0 to 1, 461, 526-0 to 1, 583-0 to 2, 584 |
| Image processing | | [Counter] 1370, 1371, 1372, 1378, 1380, 1382, 1385, 1386, 1387, 1388 [Setting] 815-0 to 2 |
| RADF | [Aligning amount] 354, 355 [Sensor/EEPROM] 356 [Transporting] 357, 358, 365, 366 [Volume] 367, 368 | [Switchback] 462 |
| Finisher | [Binding/Folding position] 468-0 to 2 | [Stapling] 704-0 to 1 |

| Classification | Adjustment Mode (05) | Setting Mode (08) |
|----------------|----------------------|--|
| Network | | [AppleTalk] 1014, 1015, 1936 [Bindery] 1026 [Community] 1065, 1066 [DDNS] 1020, 1112 [DHCP] 1755, 1756, 1757, 1762 [Directory] 1028, 1029 [DNS] 1017, 1018, 1019 [E-mail] 265, 1097, 1098, 1477, 1478, 1489, 1491 [File] 1779, 1782, 1783, 1784, 1785, 1786 [FTP] 1055, 1059, 1060, 1089, 1090, 1091, 1092 [HTTP] 1030, 1031, 1032 [IP Conflict] 1440 [IP Filter] 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739 [IPP] 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1447, 1448, 1449, 1450, 1451 [IPX] 1011, 1099 [IP address] 1006, 1007, 1008, 1009, 1010, 1767, 1768 [LDAP] 1016, 1138, 1488, 1923, 1924 [LPD] 1075, 1076, 1077 [MAC address] 1141 [MIB] 1063 [NDS] 1027 [Netware] 1128, 1129, 1134, 1143, 1144, 1148 [NIC] 1002 [Novell] 1093, 1094 [PCL setting] 973 [POP3] 1046, 1047, 1048, 1049, 1050, 1051, 1052 [RawPort] 945 [Raw/TCP] 1073, 1074 [Raw printing] 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 978, 979 |

| Classification | Adjustment Mode (05) | Setting Mode (08) |
|----------------|----------------------|--|
| Network | | [Rendezvous] 1103, 1104, 1105 [Role Base Access] 1493, 1928 [Samba] 1137, 1464 [SearchRoot] 1095 [SMB] 1023, 1024, 1025, 1117, 1124, 1136, 1950, 1951 [SMTP] 1022, 1037, 1038, 1039, 1040, 1041, 1042, 1100, 1101, 1102, 1111 [SNTP] 1441, 1442, 1444, 1445, 1446 [SSL] 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751 [STAGE] 1939, 1940 [TRAP] 1069, 1070 [InternetFAX] 266, 1114, 1485 [Offramp] 1043, 1044, 1045 [Function] 1432, 1433, 1435, 1436 [Automatic transferring] 660, 661 [Initialization] 1119 [Scan job] 1781-0 to 1, 1915 [Speed and settings] 1003 [Data retention period] 259, 260, 264 [Domain] 1113, 1121, 1122, 1123 [Authentication] 1139, 1484, 1486, 1487, 1920, 1921, 1922, 1925, 1937, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959 [Print queue] 1096 [Frame type] 1012 [Local I/F] 614 |
| Wireless LAN | | [Supplicant] 1679, 1680, 1681, 1682, 1684, 1685, 1686, 1688, 1689, 1690, 1691, 1692, 1693, 1696, 1697, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1763, 1764, 1765, 1766 [Driver] 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678 |

| Classification | Adjustment Mode (05) | Setting Mode (08) |
|----------------|----------------------|---|
| Bluetooth | | [Data encryption] 1715 [Setting] 1710, 1711, 1712, 1713, 1714 |
| Counter | | [HDD] 390, 391, 392, 393 [External counter] 381, 1126 [Counter copy] 257 [Count method] 616, 663 [Paper source] 356, 357, 358, 359, 360, 370, 372, 374 [Black toner cartridge drive] 1410 [Paper size] 301-0 to 16, 303-0 to 16, 304-0 to 16, 305-0 to 16, 306-0 to 16, 307-0 to 16, 308-0 to 16, 309-0 to 16, 310-0 to 16, 311-0 to 16, 312-0 to 16, 313-0 to 16, 314-0 to 16, 315-0 to 16, 316-0 to 16 [Tab paper] 1412 [Double count] 344, 346, 347, 348, 349, 352, 353 [Large/Small size] 317-0 to 2, 318-0 to 2, 319-0 to 2, 320-0 to 2, 321-0 to 2, 322-0 to 2, 323-0 to 2, 324-0 to 2, 325-0 to 2, 326-0 to 2, 327-0 to 2, 328-0 to 2, 329-0 to 2, 330-0 to 2, 332-0 to 2, 333-0 to 2, 334-0 to 2, 335-0 to 2 [n-UP printing] 1530-0 to 4, 1531-0 to 4, 1532-0 to 4, 1533-0 to 1, 1534-0 to 1, 1535 |
| Version | | [FAX] 915 [HDD] 944 [Engine] 903, 905, 907, 908 [System] 900, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 933, 934, 935, 936, 937, 938, 939 |

| Classification | Adjustment Mode (05) | Setting Mode (08) |
|--------------------|---------------------------|--|
| Maintenance | [Equipment number] 976 | [FSMS] 258, 999 [HTTP] 726, 727, 728, 729, 730, 731 [PM counter] 223, 251, 252, 375, 376 [Error history] 253 [Equipment number] 995 [Emergency Mode] 710, 711 [Service notification] 702, 703, 707, 715, 716, 717, 718, 719, 720, 721, 723, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 1145, 1495 [Supply order] 732, 733, 734, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765 [Downloading] 797 [Telephone] 250 [Panel calibration] 692 |
| Scrambler board | | [HDD] 699 [Key code] 698 [Installation] 696 |
| Electronic Filing | | [Setting] 267, 270, 950, 976, 1497 |
| Data overwrite kit | | [HDD] 1422, 1424, 1426 [NVRAM] 1427 [SRAM] 1428 [Releasing F200] 633 |

| Classification | Adjustment Mode (05) | Setting Mode (08) |
|----------------|----------------------|--|
| General | | [HDD] 271, 670, 690, 691, 693, 694 [SYS ROM] 1938 [TAT partition] 1118 [Address book] 1125 [Administrator's password] 1778 [Clearing] 665, 669 [Summer time] 612 [Destination] 201 [Initialization] 947 [Setting] 949, 975, 986, 1132, 1470, 1471, 1494 [Speed switching] 497 [Databases] 684, 685, 686 [Partition] 662, 666, 667 [Banner] 678, 679, 680 [Date/Time] 200, 638 [File] 288 [Department management] 672 [BANNER MESSAGE button] 681 [Memory] 615 [User data management] 1468, 1469, 1472, 1473, 1474, 1481, 1482, 1483, 1496 [Line] 203 [Duplex printing] 683 |

3. ADJUSTMENT

3.1 Adjustment Order (Image Related Adjustment)

This chapter mainly explains the procedures for image related adjustment. When replacing components which have other specified instructions for adjustment, those specified instructions are to be obeyed in priority.

In the following diagram, the solid lines with arrow lead to essential adjustments, while the dotted lines lead to adjustments to be performed if necessary.

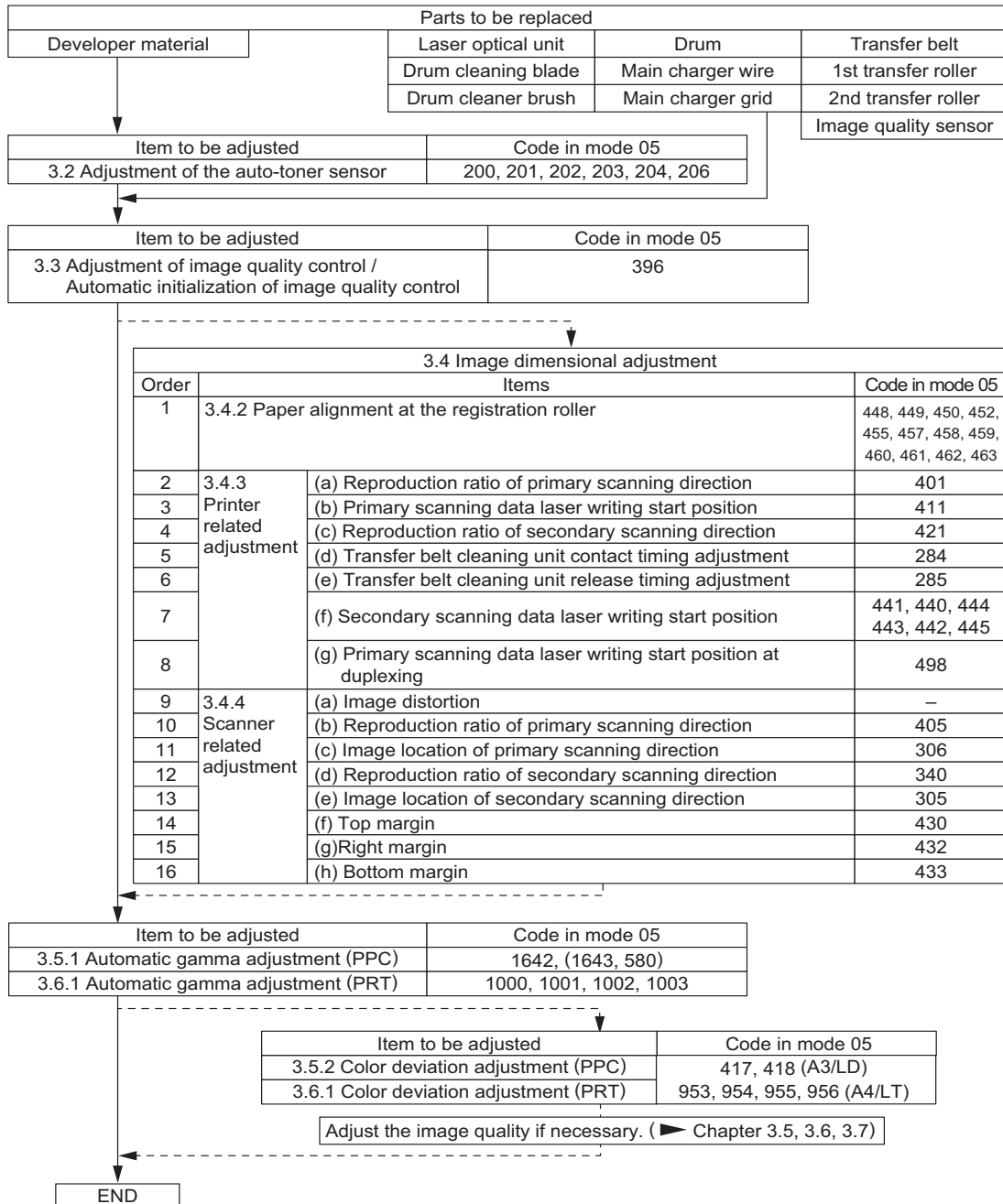


Fig.3-1

3.2 Adjustment of the Auto-Toner Sensor

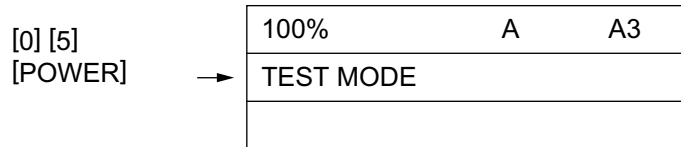
When the developer material is replaced, adjust the auto-toner sensor in the following procedure.

- (1) Install the cleaner and developer unit.

Note:

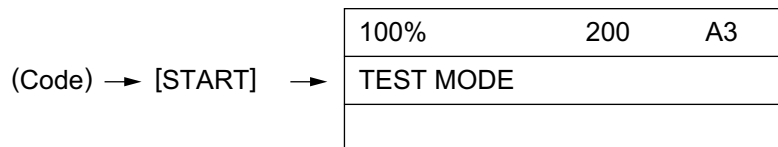
Do not install the toner cartridge.

- (2) While pressing [0] and [5] simultaneously, turn the power ON. The following message will be displayed.



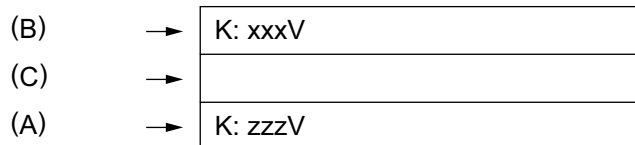
- (3) Key in a code and press the [START] button.

Code 200: All developer materials 201: Developer material Y 202: Developer material M
203: Developer material C 204: Developer material K 206: Developer material Y, M, C



- (4) Adjustment for "K" (Magnetometric sensor control)

- The following message will be displayed approx. 2 minutes later.



(B): Current sensor voltage (V)

(C): No display

(A): Target values (V) for adjustment reference voltage

Note:

The current sensor voltage (V) shown in (B) automatically changes, gradually approaching the target value for adjustment reference voltage shown in (A).

- In 30 to 60 seconds, the current sensor voltage (V) in (B) is converged. Then the sensor output control value (bit value) corresponding to the initial developer material is displayed in (C).

| | | |
|-----|---|---------|
| (B) | → | K: xxxV |
| (C) | → | K: yyy |
| (A) | → | K: zzzV |

(B): Current sensor voltage (V)

(C): Sensor output control value (bit value)

(A): Target value (V) for adjustment reference voltage

Note:

Be careful that the values in (A), (B) and (C) vary with humidity.

- In case of single-color adjustment, press the [ENTER] button to store the adjustment results in memory when the control value is displayed. In case of multiple-color adjustment, it is automatically proceeded to the adjustment of next color.

(5) Adjustments for “Y”, “M” and “C” (light sensor control)

- In 15 to 45 seconds, the following message will be displayed (The time varies with the number of colors to be adjusted).

| | | |
|-----|---|----|
| (B) | → | Y: |
| (C) | → | |
| (A) | → | Y: |

(B): Current sensor voltage (V)

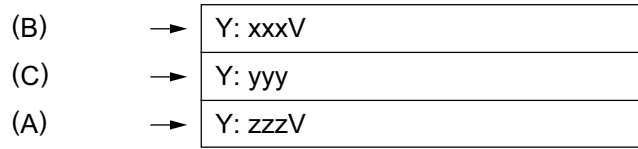
(C): No display

(A): Target value (V) for adjustment reference voltage

Note:

The current sensor voltage (V) shown in (B) automatically changes, gradually approaching the target value for adjustment reference voltage shown in (A).

- After approx. 5 seconds have passed, the current sensor voltage (V) in (B) is converged. Then the sensor output control value (bit value) corresponding to the initial developer material is displayed in (C).



(B): Current sensor voltage (V)

(C): Sensor output control value (bit value)

(A): Target value (V) for adjustment reference voltage

- In case of single-color adjustment, press the [ENTER] button to store the adjustment results in memory when the control value is displayed. In case of multiple-color adjustment, it is automatically proceeded to the adjustment of next color. When the adjustments of all colors have finished and [ENTER] is lit, press [ENTER] button to store the adjustment results in memory.

(6) Standard of adjustment value range

(A): Adjustment reference voltages (V)

| Humidity(%) | K | Y | M | C |
|---------------|------|------|------|------|
| 29.9 or below | 2.47 | 1.25 | 1.25 | 1.25 |
| 30.0-44.9 | 2.49 | | | |
| 45.0-59.9 | 2.50 | | | |
| 60.0-74.9 | 2.69 | | | |
| 75.0 or above | 2.86 | | | |

Note:

Since the adjustments for “Y”, “M” and “C” are controlled by the light sensor, the humidity correction is not performed.

(B): Current sensor voltages (V)

| Humidity(%) | K | Y | M | C |
|---------------|-----------|-----------|-----------|-----------|
| 29.9 or below | 2.37-2.57 | 1.15-1.35 | 1.15-1.35 | 1.15-1.35 |
| 30.0-44.9 | 2.39-2.59 | | | |
| 45.0-59.9 | 2.40-2.60 | | | |
| 60.0-74.9 | 2.59-2.79 | | | |
| 75.0 or above | 2.76-2.96 | | | |

Note:

Since the adjustments for “Y”, “M” and “C” are controlled by the light sensor, the humidity correction is not performed.

(7) Turn the power OFF.

(8) Install the toner cartridges.

3.3 Performing Image Quality Control

- (1) When unpacking
Prior to image dimensional adjustment, perform the "Automatic initialization of image quality control (05-396)" procedure.
- (2) When any of the following parts is replaced, be sure to perform the "Automatic initialization of image quality control (05-396)" procedure.
- Photoconductive drum
 - Image quality sensor
 - 2nd transfer roller
 - Drum cleaning blade
 - Developer material
 - Transfer belt
 - Main charger
 - Drum cleaner brush
 - Laser optical unit
 - 1st transfer roller
 - Main charger grid

Note:

When performing "Automatic gamma adjustment" in addition, "Automatic initialization of image quality control (05-396)" should be done first.

- (3) When performing "Automatic gamma adjustment" in cases no parts written above are replaced, do the "Forced performing of image quality closed-loop control (05-395)" procedure before "Automatic gamma adjustment".

| Code | Item to be adjusted | Contents |
|------|--|---|
| 395 | Forced performing of image quality closed-loop control | <p><Procedure></p> <ol style="list-style-type: none"> 1) While pressing [0] and [5] simultaneously, turn the power ON. → Adjustment Mode 2) Key in [395] and press the [START] button. 3) "WAIT" is displayed. 4) When the adjustment finishes normally, the equipment returns to the initial state of Adjustment Mode. If an error has occurred, take appropriate action by referring to "5. TROUBLESHOOTING". |
| 396 | Automatic initialization of image quality control | <p><Procedure></p> <ol style="list-style-type: none"> 1) While pressing [0] and [5] simultaneously, turn the power ON. → Adjustment Mode 2) Key in [396] and press the [START] button. 3) "WAIT" is displayed. 4) When the adjustment finishes normally, the equipment will return to initial state of the Adjustment Mode. If an error has occurred, take appropriate action by referring to "5. TROUBLESHOOTING". |

3.4 Image Dimensional Adjustment

3.4.1 General description

There are several adjustment items in the image dimensional adjustment, as listed below. Prior to this image dimensional adjustment, perform the "Automatic initialization of image quality control (05-396)". When adjusting these items, the following adjustment order should strictly be observed.

| Item to be adjusted | | Code in mode 05 |
|---|--|--|
| 1) Paper alignment at the registration roller | | 448, 449, 450, 452, 455, 457, 458, 459, 460, 461, 462, 463 |
| Printer related adjustment | Reproduction ratio of primary scanning direction (Fine adjustment of polygonal motor rotation speed) | 401 |
| | Primary scanning data laser writing start position | 411 |
| | Reproduction ratio of secondary scanning direction (Fine adjustment of main motor rotation speed) | 421 |
| | Transfer belt cleaning unit contact timing adjustment | 284 |
| | Transfer belt cleaning unit release timing adjustment | 285 |
| | Secondary scanning data laser writing start position | 441, 440, 444, 443, 442, 445 |
| | Primary scanning data laser writing start position at duplexing | 498 |
| Scanner related adjustment | Image distortion | - |
| | Reproduction ratio of primary scanning direction | 405 |
| | Image location of primary scanning direction | 306 |
| | Reproduction ratio of secondary scanning direction | 340 |
| | Image location of secondary scanning direction | 305 |
| | Top margin | 430 |
| | Right margin | 432 |
| Bottom margin | 433 | |

[Procedure to key in adjustment values]

In accordance with the procedure described below, make adjustment of each adjustment item so that the measured values obtained from test copies satisfy the specification. By pressing the [FAX] button, immediately after starting the Adjustment Mode (05), single-sided test copying can be performed (normal copy mode).

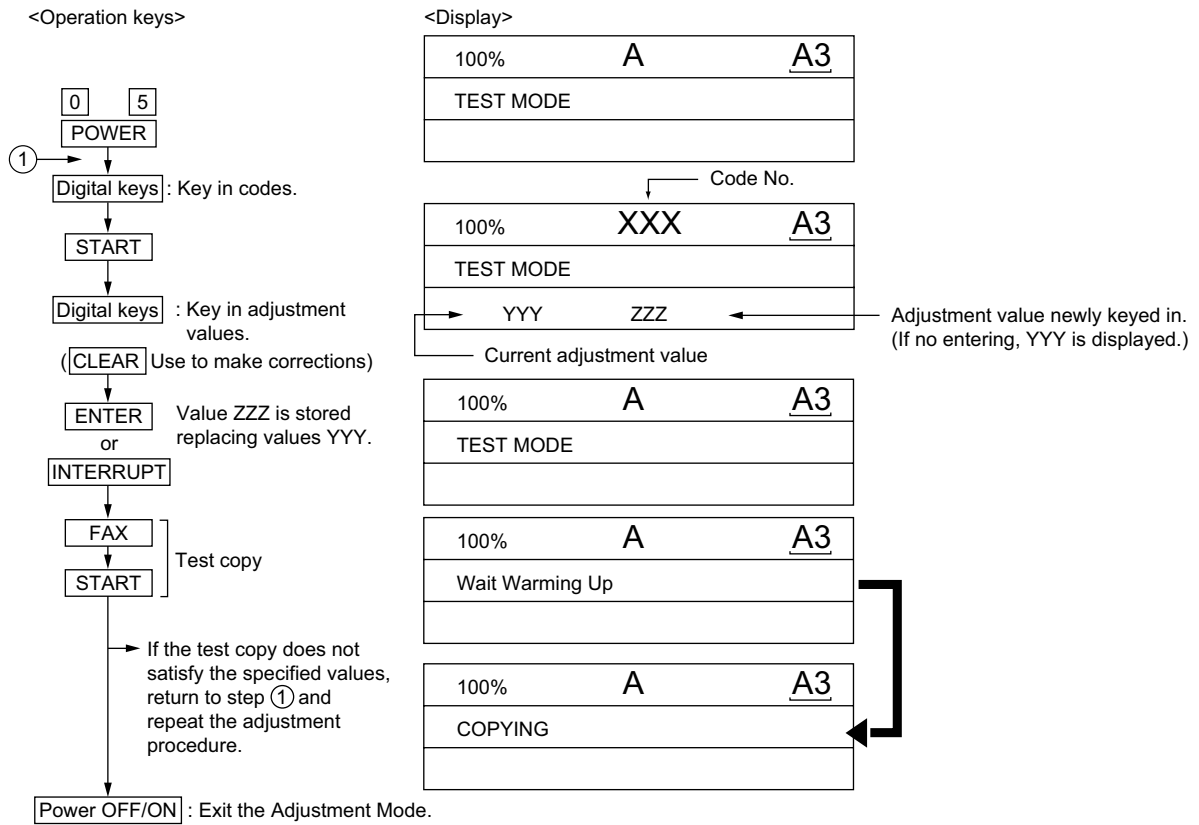


Fig.3-2

3.4.2 Paper alignment at the registration roller

The aligning amount is adjusted by using the following codes in Adjustment Mode (05).

| Paper type | Weight | Upper drawer | Lower drawer | PFP upper drawer | PFP lower drawer | LCF | ADU | Bypass feed | |
|---------------|---------------------------------------|--------------|--------------|------------------|------------------|-----|----------|-------------|----------|
| | | | | | | | | Black | Color |
| Plain paper | 64-80 g/m ² 17-20 lb. | 450 (*4) | 452 (*4) | 448 (*4) | 449 (*4) | 457 | 455 (*1) | 458 (*1) | |
| Thick paper 1 | 81-105 g/m ² 21-28 lb. | 469 (*4) | 470 (*4) | 471 (*4) | 472 (*4) | 473 | 474 (*1) | 460 (*1) | |
| Thick paper 2 | 106-163 g/m ² 29-43 lb. | - | - | - | - | - | - | 461 (*1) | 475 (*3) |
| Thick paper 3 | 164-209 g/m ² 44-55 lb. | - | - | - | - | - | - | 462 (*2) | 475 (*3) |
| OHP film | - | - | - | - | - | - | - | 463 (*1) | 475 (*3) |

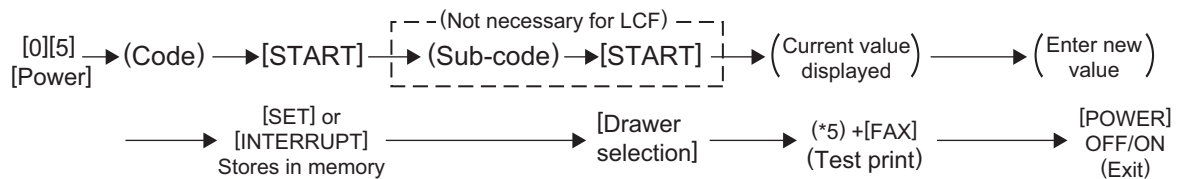
Sub-code

- (*1) 0: Long size 1: Middle size 2: Short size
 (*2) 0: Long size 1: Middle size 2: Short size 3: Post card
 (*3) 0: Long size of thick paper 2 1: Middle size of thick paper 2
 2: Short size of thick paper 2 3: Long size of thick paper 3
 4: Middle size of thick paper 3 5: Short size of thick paper 3
 6: Long size of OHP film 7: Middle size of OHP film
 8: Short size of OHP film 9: Post card
 (*4) 0: Long size 1: Middle size 2: Short size 1 3: Short size 2

Notes:

1. Long size: 330 mm or longer (13.0 inches or longer)
 Middle size: 220-329 mm (8.7-12.9 inches)
 Short size: 219 mm or shorter (8.6 inches or shorter)
 Short size 1: 205-219 mm (8.1-8.6 inches or shorter)
 Short size 2: 204 mm or shorter (8.0 inches or shorter)
2. The adjustment of "Post card" is for Japan only.

<Procedure>



- (*5) 1: Single-sided grid pattern in Black Mode
 3: Double-sided grid pattern in Black Mode
 55: Grid pattern of thick paper 2 in Full Color Mode
 56: Grid pattern of thick paper 3 in Full Color Mode
 57: Grid pattern of OHP film in Full Color Mode
 58: Single-sided grid pattern of thick paper 2 in Black Mode
 59: Single-sided grid pattern of thick paper 3 in Black Mode
 60: Single-sided grid pattern of OHP film in Black Mode

Note:

If the aligning amount is too large, abnormal noise (paper-folding noise) or actual paper folding may occur during paper feeding. If the aligning amount is too small, on the other hand, a skew, an image dislocation in feeding direction or a paper exit jam (E010) may occur. Pay attention to the above and select the appropriate value.

3.4.3 Printer related adjustment

The printer related adjustment is performed by using the printed out grid pattern.

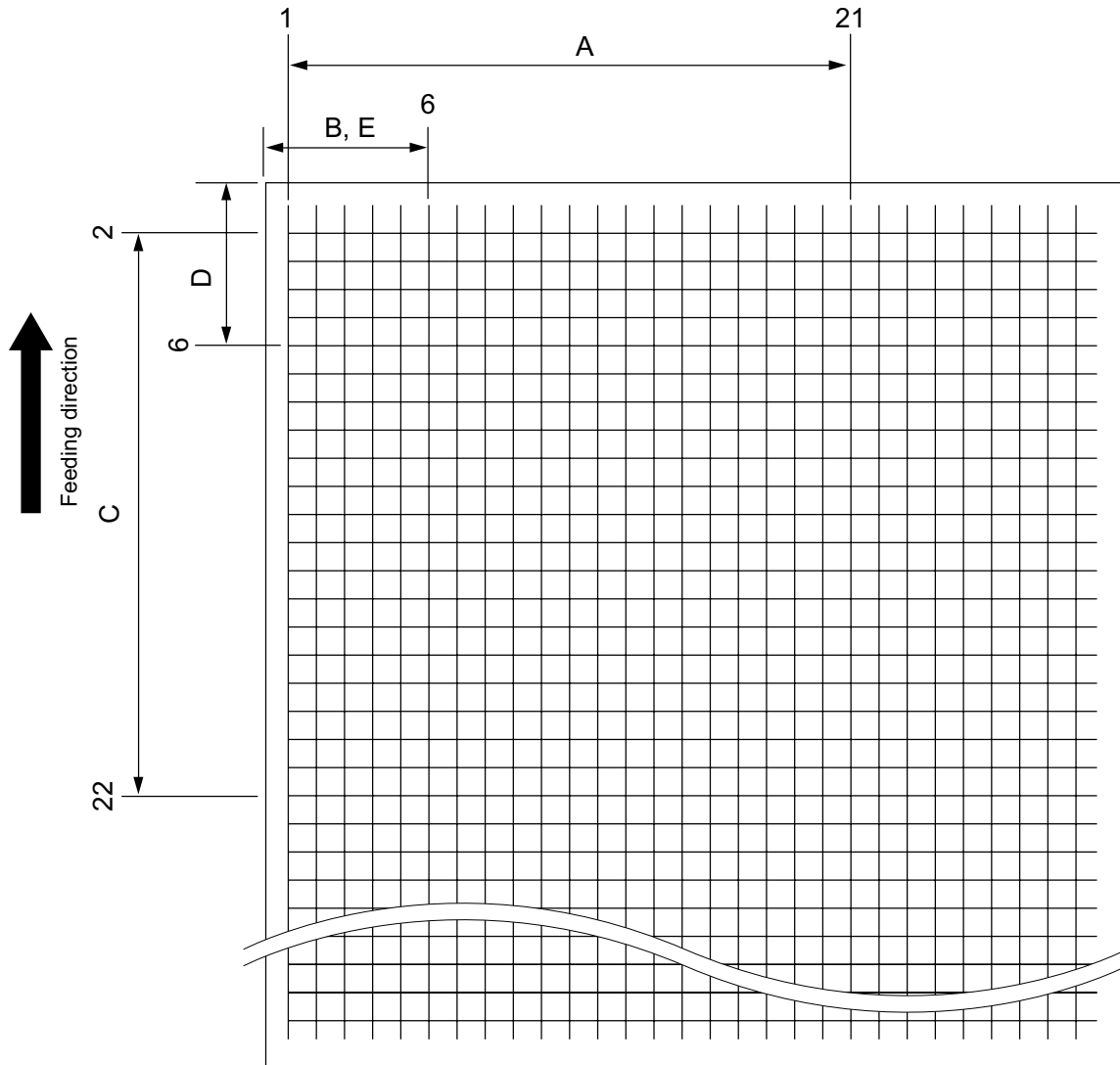


Fig.3-3

| | Adjustment Tolerance | Detail of adjustment |
|---|------------------------|---|
| A | $200 \pm 0.5\text{mm}$ | Refer to “[A] Reproduction ratio of primary scanning direction (Fine adjustment of polygonal motor rotation speed (Printer))” |
| B | $52 \pm 0.5\text{mm}$ | Refer to “[B] Primary scanning data laser writing start position (Printer)” |
| C | $200 \pm 0.5\text{mm}$ | Refer to “[C] Reproduction ratio of secondary scanning direction (Fine adjustment of main motor rotation speed (Printer))” |
| D | $52 \pm 0.5\text{mm}$ | Refer to “[F] Secondary scanning data laser writing start position” |
| E | $52 \pm 0.5\text{mm}$ | Refer to “[G] Primary scanning data laser writing start position at duplexing” |

[A] Reproduction ratio of primary scanning direction (Fine adjustment of polygonal motor rotation speed (Printer))

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
- (2) Press [1] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD from the lower drawer.)
- (3) Measure the distance A from the 1st line to the 21st line of the grid pattern.
- (4) Check if the distance A is within 200 ± 0.5 mm.
- (5) If not, use the following procedure to change values and measure the distance A again.
<Procedure>
(Adjustment Mode) → (Key in the code [401]) → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
→ "100% A" is displayed.
→ Press [1] → [FAX] → (A grid pattern is printed out.)
* The larger the adjustment value is, the longer the distance A becomes (approx. 0.1 mm/step).

[B] Primary scanning data laser writing start position (Printer)

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
- (2) Press [1] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD from the lower drawer.)
- (3) Measure the distance B from the left edge of the paper to the 6th line of the grid pattern.
- (4) Check if the distance B is within 52 ± 0.5 mm.
- (5) If not, use the following procedure to change values and measure the distance B again.
<Procedure>
(Adjustment Mode) → (Key in the code [411]) → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
→ "100% A" is displayed
→ Press [1] → [FAX] → (A grid pattern is printed out.)
* The larger the adjustment value is, the longer the distance B becomes (approx. 0.04 mm/step).

[C] Reproduction ratio of secondary scanning direction (Fine adjustment of main motor rotation speed (Printer))

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
- (2) Press [1] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD from the lower drawer.)
- (3) Measure the distance C from the 2nd line at the leading edge of the paper to the 22nd line of the grid pattern.
* Normally, the 1st line of the grid pattern is not printed.
- (4) Check if the distance C is within 200 ± 0.5 mm.
- (5) If not, use the following procedure to change values and measure the distance C again.
<Procedure>
(Adjustment Mode) → (Key in the code [426]) → [START]
* Confirm that the input value is [153]. If not, key in [153].
→ (Key in [153])
→ [ENTER] or [INTERRUPT] (Stored in memory)
→ (Key in the code [421]) → [START]
→ (Key in a value (recommended values: 110 to 140 / acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)

- * When the value is not within the recommended values, the trailing edge area of the image may be out of position for the paper length or the density at the trailing edge area of the image may become lower. Perform the adjustment confirming the image.
- “100% A” is displayed
- Press [1] → [FAX] → (A grid pattern is printed out.)
- * The larger the adjustment value is, the longer the distance C becomes (approx. 0.5 mm/6 steps).

[D] Transfer belt cleaning unit contact timing adjustment

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
 - (2) According to the input value for “Adjustment of secondary scanning direction reproduction ratio (421)”, key in the value shown in the following table.
- * Be sure to key in the correct value because incorrect value may reduce the cleaning efficiency of the transfer belt.

| Adjustment (code) | Input value | | | |
|---|-------------|---------|---------|---------|
| Adjustment of secondary scanning direction reproduction ratio (421) | 110 | 111-120 | 121-130 | 131-140 |
| Transfer belt cleaning unit contact timing adjustment (284) | 147 | 143 | 141 | 137 |

<Procedure>

- (Adjustment Mode) → (Key in the code [284]) → [START]
 → (Key in a value)
 → [ENTER] or [INTERRUPT] (Stored in memory)

[E] Transfer belt cleaning unit release timing adjustment

This adjustment has to be performed after “Adjustment of secondary scanning direction reproduction ratio (421)” Acceptable values are 88 to 168. The larger the value is, the later the transfer belt cleaning unit release timing becomes.

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
 - (2) According to the input value for “Adjustment of secondary scanning direction reproduction ratio (421)”, key in the value shown in the following table.
- * Be sure to key in the correct value because incorrect value may reduce the cleaning efficiency of the transfer belt.

| Adjustment (code) | Input value | | | |
|---|-------------|---------|---------|---------|
| Adjustment of secondary scanning direction reproduction ratio (421) | 110 | 111-120 | 121-130 | 131-140 |
| Transfer belt cleaning unit release timing adjustment (285) | 147 | 143 | 141 | 137 |

<Procedure>

- (Adjustment Mode) → (Key in the code [285]) → [START]
 → (Key in a value)
 → [ENTER] or [INTERRUPT] (Stored in memory)

[F] Secondary scanning data laser writing start position

This adjustment has to be performed for each paper source.

The following table shows the order of the paper source to be adjusted, code, paper size and acceptable values.

| Order for adjustment | Paper source | Code | Paper size | Acceptable value | Remarks |
|----------------------|--------------|---------|------------|------------------|---------------------------------|
| 1 | Lower drawer | 441 | A3/LD | 0 to 80 | |
| 2 | Upper drawer | 440 | A4/LT | 0 to 40 | |
| 3 | PFP or LCF | 444/443 | A4/LT | 0 to 40 | |
| 4 | Bypass feed | 442 | A4/LT | 0 to 40 | |
| 5 | Duplexing | 445 | A3/LD | 0 to 40 | Paper fed from the lower drawer |

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
- (2) Press [1] ([3] for duplexing) → [FAX]. (A grid pattern with 10 mm squares is printed out.)
- (3) Measure the distance D from the leading edge of the paper to the 6th line of the grid pattern.
 - * Normally, the 1st line of the grid pattern is not printed.
 - * At the duplexing, measure it on the top side of the grid pattern.
- (4) Check if the distance D is within 52 ± 0.5 mm.
- (5) If not, use the following procedure to change values and measure the distance D again.
<Procedure>
(Adjustment Mode) → (Key in the code shown above) → [START]
→ (Key in an acceptable value shown above)
→ [ENTER] or [INTERRUPT] (Stored in memory)
→ "100% A" is displayed
→ Press [1] ([3] for duplexing)
→ [FAX] → (A grid pattern is printed out.)
 - * The larger the adjustment value is, the longer the distance D becomes (approx. 0.2 mm/step).

[G] Primary scanning data laser writing start position at duplexing

Note:

Make sure the first line of the grid pattern is printed out since the line is occasionally vanished.

[G-1] Adjustment for long-sized paper

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
- (2) Press [3] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD from the lower drawer.)
- (3) Check the grid pattern on the test print and measure the distance E from the left edge of the paper to the 6th line of the grid pattern.
- (4) Check if the distance E is within 52 ± 0.5 mm.
- (5) If not, use the following procedure to change values and measure the distance E again.
<Procedure>
(Adjustment Mode) → (Key in the code [498]) → [START] → [0] → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
→ "100% A" is displayed.
→ Press [3] → [FAX] → (A grid pattern is printed out.)
 - * The larger the adjustment value is, the longer the distance E becomes (approx. 0.04 mm/step).

[G-2] Adjustment for short-sized paper

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
- (2) Press [3] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A4/LT from the upper drawer.)
- (3) Check the grid pattern on the test print and measure the distance E from the left edge of the paper to the 6th line of the grid pattern.
- (4) Check if the distance E is within 52 ± 0.5 mm.
- (5) If not, use the following procedure to change values and measure the distance E again.

<Procedure>

(Adjustment Mode) → (Key in the code [498]) → [START] → [1] → [START]

→ (Key in a value (acceptable values: 0 to 255))

→ [ENTER] or [INTERRUPT] (Stored in memory)

→ "100% A" is displayed

→ Press [3] → [FAX] → (A grid pattern is printed out.)

* The larger the adjustment value is, the longer the distance E becomes (approx. 0.04 mm/step).

<Adjustment procedure summarization for A to E>

- [0] [5] [Power ON] → [1] ([3](05-445, 498) for duplexing) → [FAX]
- | | |
|-------------------------------------|-------------------------------------|
| A: 05-401 (Lower drawer, A3/LD) | → 200 ± 0.5 mm (0.1 mm/step) |
| B: 05-411 (Lower drawer, A3/LD) | → 52 ± 0.5 mm (0.04 mm/step) |
| | → Key in the same value for 05-410. |
| C: 05-421 (Lower drawer, A3/LD) | → 200 ± 0.5 mm (0.5 mm/6 steps) |
| D: 05-440 (Upper drawer, A4/LT) | → 52 ± 0.5 mm (0.2 mm/step) |
| 441 (Lower drawer, A3/LD), | |
| 442 (Bypass feed, A4/LT), | |
| 443 (LCF, A4/LT), 444 (PFP, A4/LT), | |
| 445 (Duplexing, A3/LD) | |
| E: 05-498-0 (Lower drawer, A3/LD), | → 52 ± 0.5 mm (0.04 mm/step) |
| 498-1 (Upper drawer, A4/LT) | |

3.4.4 Scanner related adjustment

[A] Image distortion

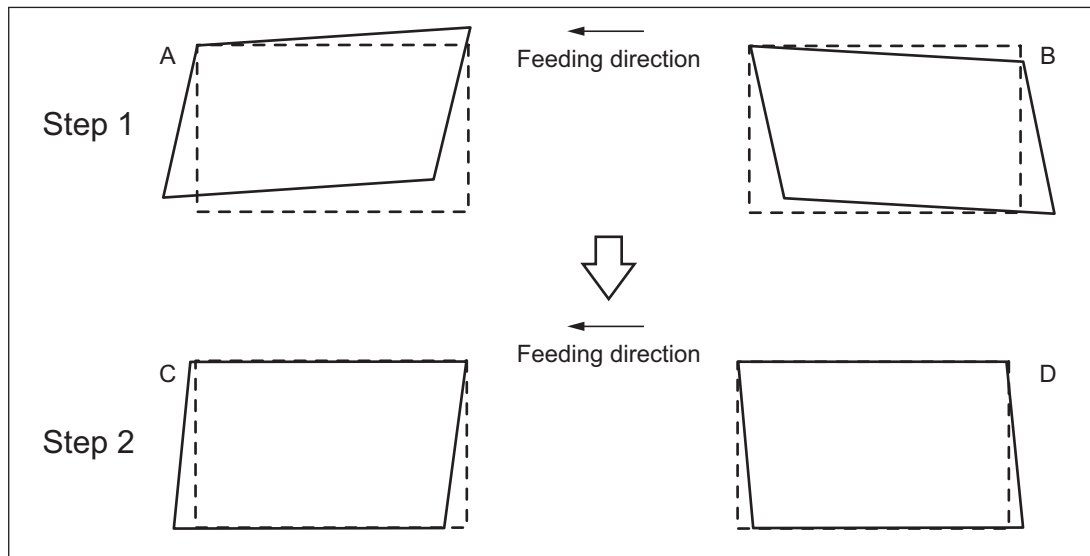


Fig.3-4

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Press [FAX] to make a copy of any image on a sheet of A3/LD paper.
- (3) Key in [308] and press the [START] button to move the carriage to the adjustment position.

- (4) Make an adjustment in the order of step 1 and 2.

Step 1

In case of A:

Tighten the mirror-3 adjustment screw (CW).

In case of B:

Loosen the mirror-3 adjustment screw (CCW).

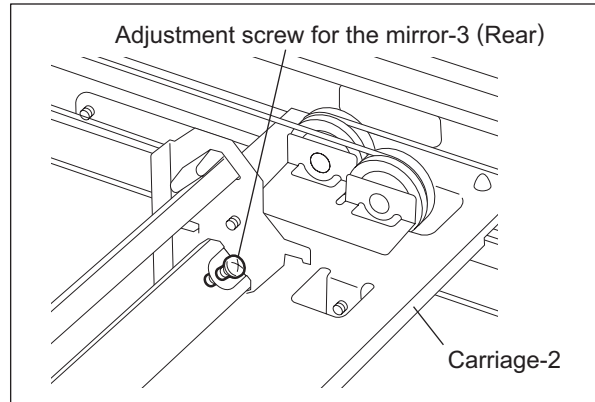


Fig.3-5

Step 2

In case of C:

Tighten the mirror-1 adjustment screw (CW).

In case of D:

Loosen the mirror-1 adjustment screw (CCW).

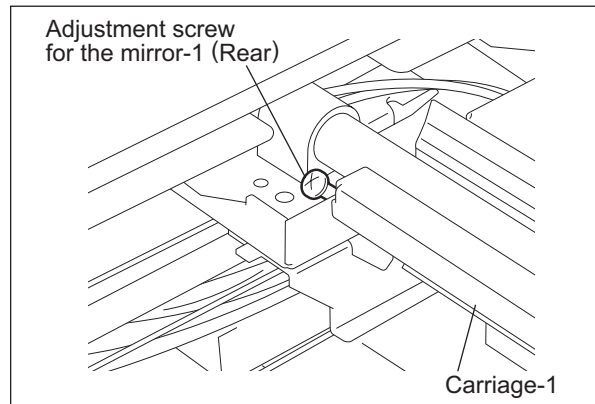


Fig.3-6

- (5) Apply the screw locking agents to the adjustment screws. (2 areas)
- Recommended screw lock agent
Manufacturer: Three Bond
Product name: 1401E

The following adjustments (b) to (e) should be performed with Test Chart No. TCC-1. (Refer to page 3-19.)

[B] Reproduction ratio adjustment of primary scanning direction

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
- (2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
- (3) Press [FAX] → [START] to make a copy at the mode of A3/LD, 100%, Black and Text/Photo.
- (4) Measure the distance A between M1 and M2 on the copy with a ruler.
- (5) Check if the distance A is within 200 ± 0.5 mm.
- (6) If not, use the following procedure to change values and repeat step 3. to 5. above.
<Procedure>
(Adjustment Mode) → (Key in the code [405]) → [START]
→ (Key in a value (acceptable values: 0 to 255) with digital keys)
→ [ENTER] or [INTERRUPT] (Stored in memory)
* The larger the adjustment value is, the longer the distance A becomes (approx. 0.1 mm/step).

[C] Image location of primary scanning direction

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
- (2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
- (3) Press [FAX] → [START] to make a copy at the mode of A4/LT, 100%, Black and Text/Photo.
- (4) Measure the distance B from the left paper edge to the 10 mm line of left grid pattern on the copy with a ruler.
- (5) Check if the distance B is within 10 ± 0.5 mm.
- (6) If not, use the following procedure to change values and repeat step 3. to 5. above.
<Procedure>
(Adjustment Mode) → (Key in code [306]) → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
* The larger the adjustment value is, the longer the distance B becomes (approx. 0.04 mm/step).

[D] Reproduction ratio of secondary scanning direction

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
- (2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
- (3) Press [FAX] → [START] to make a copy at the mode of A4/LT, 100%, Black and Text/Photo.
- (4) Measure the distance C between M3 and M4 on the copy with a ruler.
- (5) (Adjustment Mode) → (Key in the code [340]) → [START]
- (6) If not, use the following procedure to change values and repeat step 3. to 5. above.
<Procedure>
(Adjustment Mode) → (Key in the code [340]) → [START]
→ (Key in a value (acceptable values: 0 to 255))
→ [ENTER] or [INTERRUPT] (Stored in memory)
* The larger the adjustment value is, the longer the distance C becomes (approx. 0.22 %/step).

[E] Image location of secondary scanning direction

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
- (2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
- (3) Press [FAX] → [START] to make a copy at the mode of A4/LT, 100%, Black and Text/Photo.
- (4) Measure the distance D from the top paper edge to the 10 mm line of top grid pattern on the copy with a ruler.
- (5) Check if the distance D is within 10 ± 0.5 mm.

- (6) If not, use the following procedure to change values and repeat step 3. to 5. above.
 <Procedure>
 (Adjustment Mode) → (Key in the code [305]) → [START]
 → (Key in a value (acceptable values: 92 to 164))
 → [ENTER] or [INTERRUPT] (Stored in memory)
 * The larger the adjustment value is, the longer the distance D becomes (approx. 0.14 mm/step).

[F] Top margin

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
 (2) Open the platen cover or RADF.
 (3) Press [FAX] → [START] to make a copy at the mode of A3/LD, 100%, Black, Text/Photo and lower drawer.
 (4) Measure the blank area E at the leading edge of the copied image.
 (5) Check if the blank area E is within the range of 3 ± 0.5 mm.
 (6) If not, use the following procedure to change values and repeat the steps 3. to 5. above.
 <Procedure>
 (Adjustment Mode) → (Key in the code [430]) → [START]
 → (Key in a value (acceptable values: 0 to 255))
 → [ENTER] or [INTERRUPT] (Stored in memory)
 → ("100% A" is displayed.)
 * The larger the adjustment value is, the wider the blank area becomes (approx. 0.04 mm/step).

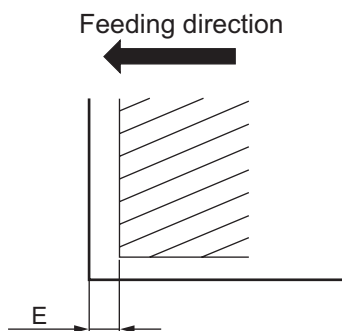


Fig.3-7

[G] Right margin

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
 (2) Open the platen cover or RADF.
 (3) Press [FAX] → [START] to make a copy at the mode of A3/LD, 100%, Black, Text/Photo and lower drawer.
 (4) Measure the blank area F at the right side of the copied image.
 (5) Check if the blank area F is within the range of 2 ± 1 mm, 2-0.5 mm.
 (6) If not, use the following procedure to change values and repeat the steps 3. to 5. above.
 <Procedure>
 (Adjustment Mode) → (Key in the code [432]) → [START]
 → (Key in a value (acceptable values: 0 to 255))
 → [ENTER] or [INTERRUPT] (Stored in memory).
 → ("100% A" is displayed.)

- * The larger the adjustment value is, the wider the blank area at the right side becomes (approx. 0.04 mm/step).

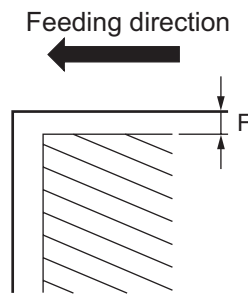


Fig.3-8

[H] Bottom margin

- (1) While pressing [0] and [5] simultaneously, turn the power ON. → (Adjustment Mode)
- (2) Open platen cover or RADF.
- (3) Press the [FAX] → [START] to make a copy at the mode of A3/LD, 100%, Black, Text/Photo and lower drawer.
- (4) Measure the blank area G at the trailing edge of the copied image.
- (5) Check if the blank area G is within the range of 2 ± 0.5 mm.
- (6) If not, use the following procedure to change values and repeat the steps 2. to 4. above.

<Procedure>

(Adjustment Mode) → (Key in the code [433]) → [START]

→ (Key in value (acceptable values: 0 to 255))

→ [ENTER] or [INTERRUPT] (stored in memory)

→ ("100% A" is displayed.)

- * The larger the adjustment value is, the wider the blank area at the trailing edge becomes (approx. 0.04 mm/step).

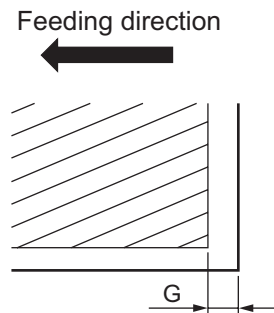


Fig.3-9

- **Adjustments and Checks using Test Chart No. TCC-1**
 Following items can be checked with the Test Chart No. TCC-1.
 1) Points to be measured in the chart

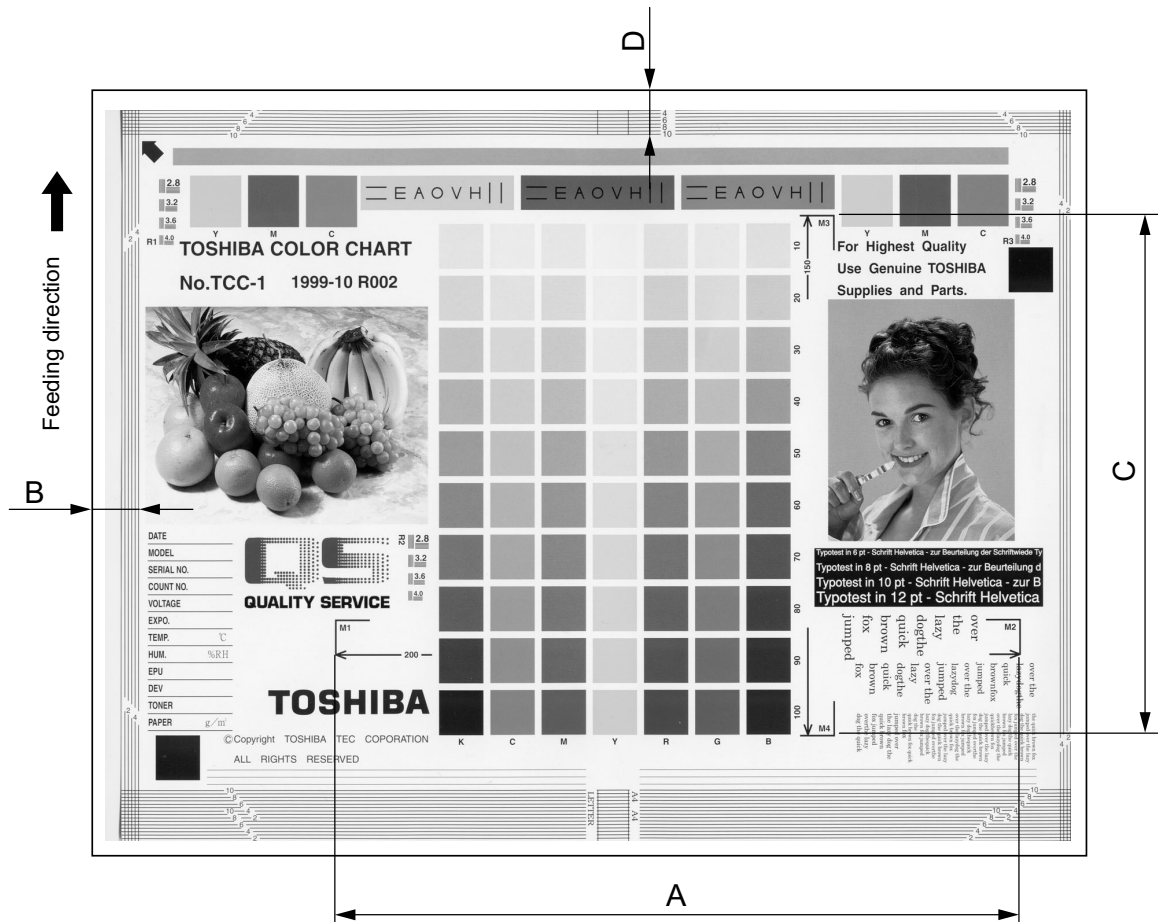


Fig.3-10

<Adjustment order>

[0] [5] [Power ON] → (Chart TCC-1) → [FAX] → [START] (A3/LD, 100%, Black and Text/Photo)

- A: 05-405 → 200±0.5 mm (0.1 mm/step)
- B: 05-306 → 5±0.5 mm (0.04 mm/step)
- C: 05-340 → 150±0.5 mm (0.3 mm/step)
- D: 05-305 → 10±0.5 mm (0.14 mm/step)

2) Checking areas of the chart and their descriptions

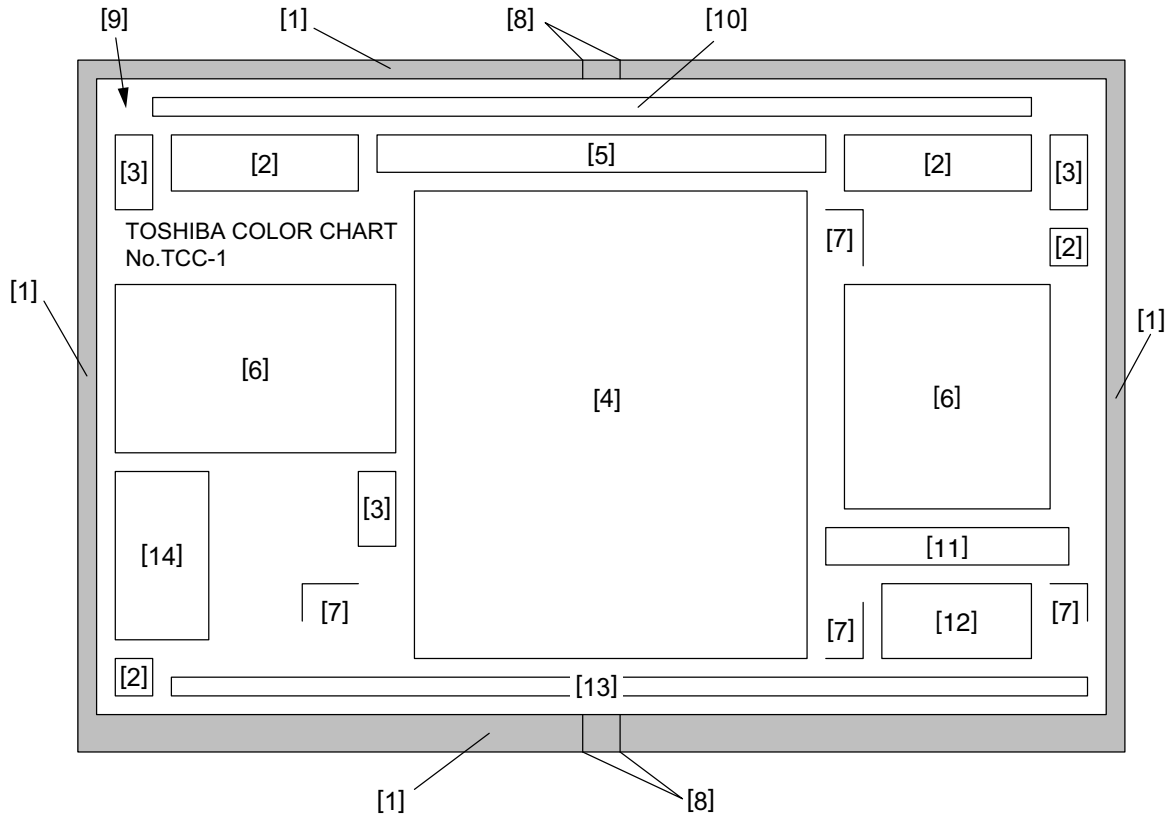


Fig.3-11

- | | | |
|------|-------------------------------|---|
| [1] | Grid patterns | : For adjusting margin (void) and scanner section |
| [2] | YMCK patches | : For checking uniformity |
| [3] | Resolution patterns | : For checking resolution |
| [4] | Gradation pattern | : Gradation pattern of seven colors (Y, M, C, R, G, B and K) Coverage: 10-100% For adjusting the halftone reproduction and gray balance |
| [5] | Color registration pattern | : For checking color registration |
| [6] | Pictures | : For checking color reproduction and moire |
| [7] | Magnification lines | : For checking the magnification error of primary and secondary scanning directions |
| [8] | Center lines | : Center lines for A4/LT sizes |
| [9] | Arrow | : A mark for placing the chart properly onto the original glass (place it to the left rear corner of the original glass.) |
| [10] | Halftone band | : For checking uniformity |
| [11] | White text on the black solid | : For checking the reproduction of white text on black solid |
| [12] | Text | : For checking reproduction of text |
| [13] | Thin lines | : For checking reproduction of the thin lines (line width: 100µm) |
| [14] | Note area | : For recording the date, conditions, etc. |

3.5 Image Quality Adjustment (Copying Function)

3.5.1 Automatic gamma adjustment

When the reproduction of gradation is not appropriate, the gradation reproducibility of all colors Y, M, C and K can be corrected by performing this automatic gamma adjustment. In case the gradation reproduction of the image checked is not satisfactory, make this adjustment as described below at parts replacement.

- (1) When unpacking or any of the following parts has been or replaced, be sure to make this adjustment:
 - Laser optical unit
 - Main charger wire
 - 1st transfer roller
 - Image Quality sensor
 - Photoconductive drum
 - Main charger grid
 - Drum cleaning blade
 - Developer material
 - Transfer belt
 - Drum cleaner brush
- (2) When any of the following parts are replaced or adjusted, make a copy and check the image to determine if adjustment is necessary:
 - 2nd transfer roller

Notes:

1. Be sure that this adjustment be made after performing the image adjustment in "3.3 Adjustment of Image Quality Control" and "3.4 Image Dimensional Adjustment".
2. Normally, only the adjustment of color/black integrated pattern is needed. When the adjustment of "3.5.12 Beam level conversion setting" is made, color pattern and black pattern need to be adjusted individually.

<Adjustment Mode (05)>

| Code | Item to be adjusted | Contents | | | | | | | | | | | | |
|-------------------------|----------------------------|--|-------------|---------|---------|---|------------------------|---------------------------|-----|-------|--------------------------|----|-------|---------------------------|
| 1642 (1643) (580) | Automatic gamma adjustment | <p><Procedure></p> <ol style="list-style-type: none"> 1) While pressing [0] and [5] simultaneously, turn the power ON. → Adjustment Mode 2) Select the A4/LT drawer. Key in the pattern number and press the [FAX] button to output a "Patch chart for gamma adjustment". <table style="margin-left: 20px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Pattern No.</th> <th style="text-align: left;">Pattern</th> <th style="text-align: left;">Remarks</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>Color/black integrated</td> <td>When performing code 1642</td> </tr> <tr> <td>10*</td> <td>Black</td> <td>When performing code 580</td> </tr> <tr> <td>5*</td> <td>Color</td> <td>When performing code 1643</td> </tr> </tbody> </table> <p>* This adjustment is performed only when "3.5.12 Beam level conversion setting" is performed. Usually, only the adjustment with the color/black integrated pattern (05-1642) is performed.</p> 3) Place the patch chart for adjustment printed in step (2) face down on the original glass. In the cases of patterns 4 and 5, place the chart aligning its side with 2 black squares against the original scale. In the case of pattern 10, place the chart aligning its black side of the gradation pattern against the original scale. 4) Key in a code and press the [START] button. → The scanner reads the chart automatically and performs automatic gamma adjustment calculation (approx. 30 sec.). 5) When the adjustment has finished normally, "ENTER" is shown. Press the [ENTER] button to have the adjustment results reflected. (To cancel the reflection of adjustment results, press the [CANCEL] button.) In the case of an abnormal ending, "ADJUSTMENT ERROR" is shown. Press the [CANCEL] button to clear the error display. When it is cleared, the control panel display will return to the ready state. Then, check if the patch chart on the original glass is placed in the wrong direction or if it is placed inclined on the original glass, and then repeat step (3) and afterward. | Pattern No. | Pattern | Remarks | 4 | Color/black integrated | When performing code 1642 | 10* | Black | When performing code 580 | 5* | Color | When performing code 1643 |
| Pattern No. | Pattern | Remarks | | | | | | | | | | | | |
| 4 | Color/black integrated | When performing code 1642 | | | | | | | | | | | | |
| 10* | Black | When performing code 580 | | | | | | | | | | | | |
| 5* | Color | When performing code 1643 | | | | | | | | | | | | |

3.5.2 Color Deviation Adjustment

The color deviation amount of the secondary scanning direction can be adjusted as follows.

There are 2 methods to adjust color deviation; using "Test pattern 63 (for A3/LD size paper)" or "Test pattern 68 (for A4/LT size paper)" (adjustment method 1), and using "Test pattern 64 (for A3/LD size paper)" (adjustment method 2). Adjust using either one of these methods.

* Only adjustment method 1 can be used for A4/LT paper.

| Adjustment method | Type | Printing Image | Paper size, Number of pages | Procedures |
|-------------------|-------------------------|----------------|-----------------------------|-------------|
| 1 | Test pattern 63 (A3/LD) | Ladder | A3/LD, 2 pages | 05-63-[FAX] |
| | Test pattern 68 (A4/LT) | Ladder | A4/LT, 4 pages | 05-68-[FAX] |
| 2 | Test pattern 64 (A3/LD) | Block | A3/LD, 2 pages | 05-64-[FAX] |

Note:

Follow the procedure in the order below for the color deviation adjustment.

If you start in the middle of the procedure, continue the subsequent steps.

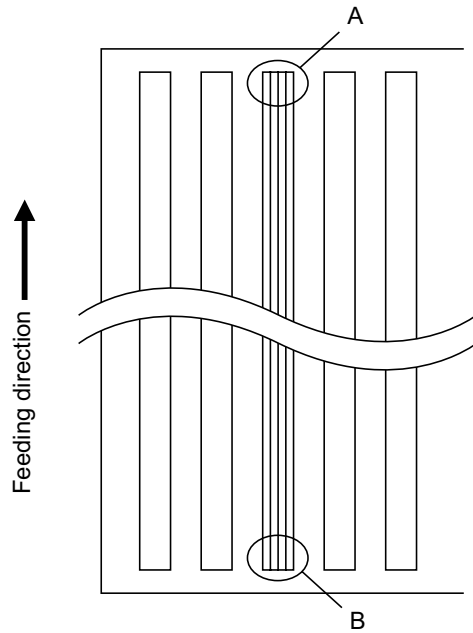
E.g.: If you start with step 2 (A3/LD, 2nd sheet), perform steps 3 to 6.

| Order | Test pattern |
|-------|-----------------|
| 1 | A3/LD, 1st page |
| 2 | A3/LD, 2nd page |
| 3 | A4/LT, 1st page |
| 4 | A4/LT, 2nd page |
| 5 | A4/LT, 3rd page |
| 6 | A4/LT, 4th page |

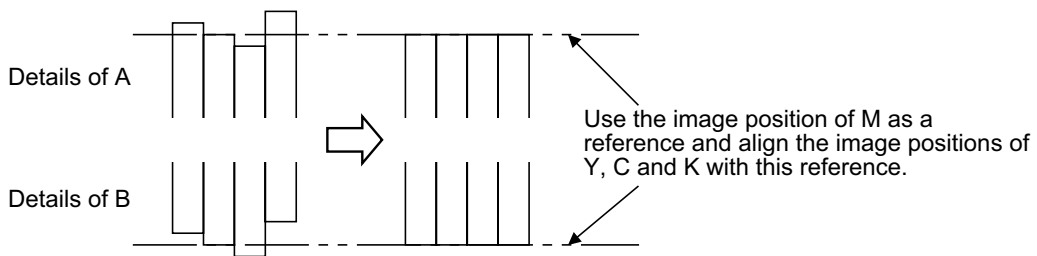
Adjustment method 1

<Adjustment procedures (for A3/LD size paper)>

Test pattern (Ladder)



[Test pattern]



[Details of adjustment area]

Fig.3-12

This adjustment should be applied for each printout of the test pattern. (Skip this if the test pattern is printed correctly.)

The order of the adjustment, test patterns and codes to be used are listed below.

| Order | Test pattern | Code |
|-------|--------------|------|
| 1 | 1st page | 417 |
| 2 | 2nd page | 418 |

- (1) While pressing the digital keys [0] and [5] simultaneously, turn the power ON. -> (Adjustment Mode)
- (2) Print out the test pattern and adjust its deviation amount (above). Use the image position of magenta (M) as a reference for adjustment. The image positions of yellow (Y), cyan (C) and black (K) must be adjusted with this reference.
 - Select A3/LD size. Key in "63" and then press the [FAX] button. -> 2 pages of the test pattern are printed out.
 - Check the image of the test pattern (above) and specify the color to be adjusted.
 - Key in the code (listed above) and press the [START] button.
 - Key in the sub code of the color to be adjusted and press the [START] button.
Sub code 0: Black (K) 1: Cyan (C) 3: Yellow (Y)
 - Key in the adjustment value and press the [ENTER] or [INTERRUPT] button.

Notes:

1. When the value increases by "1", the image shifts toward the trailing edge of the paper by 0.0423 mm.
2. Adjust the image positions of black (B), cyan (C) and yellow (Y) to align the leading/trailing edge of each image. If both leading and trailing edges are not aligned, adjust the deviation amount of each edge so that it is uniformed.

- (3) Repeat Step (2) until all the test patterns are printed correctly.

Notes:

1. Since the adjusted value is reflected to that of the subsequent steps, be sure to perform the rest of adjustment.
2. Print out the test pattern for each adjustment.

- (4) Turn the power OFF.

<Adjustment procedures (for A4/LT size paper)>

Use "Test pattern 68" for the adjustment method to adjust a color deviation.

* Perform this adjustment after <Adjustment procedures (for A3/LD size paper)> is performed.

This adjustment should be applied for each printout of the test pattern. (Skip this if the test pattern is printed correctly.)

The order of the adjustment, test patterns and codes to be used are listed below.

| Order | Test pattern | Code |
|-------|--------------|------|
| 1 | 1st page | 953 |
| 2 | 2nd page | 954 |
| 3 | 3rd page | 955 |
| 4 | 4th page | 956 |

- (1) While pressing the digital keys [0] and [5] simultaneously, turn the power ON. -> (Adjustment Mode)

- (2) Print out the test pattern and adjust its deviation amount (above). Use the image position of magenta (M) as a reference for adjustment. The image positions of yellow (Y), cyan (C) and black (K) must be adjusted with this reference.
- Select A4/LT size. Key in "68" and then press the [FAX] button. -> 4 pages of the test pattern are printed out.
 - Check the image of the test pattern (above) and specify the color to be adjusted.
 - Key in the code (listed above) and press the [START] button.
 - Key in the sub code of the color to be adjusted and press the [START] button.
Sub code 0: Black (K) 1: Cyan (C) 3: Yellow (Y)
 - Key in the adjustment value and press the [ENTER] or [INTERRUPT] button.

Notes:

1. When the value increases by "1", the image shifts toward the trailing edge of the paper by 0.0423 mm.
2. Adjust the image positions of black (B), cyan (C) and yellow (Y) to align the leading/trailing edge of each image. If both leading and trailing edges are not aligned, adjust the deviation amount of each edge so that it is made uniform.

- (3) Repeat Step (2) until all the test patterns are printed correctly.

Notes:

1. Since the adjusted value is reflected in that of the subsequent steps, be sure to perform the rest of the adjustment.
2. Print out the test pattern for each adjustment.

- (4) Turn the power OFF.

Adjustment method 2
 Test pattern (Block)

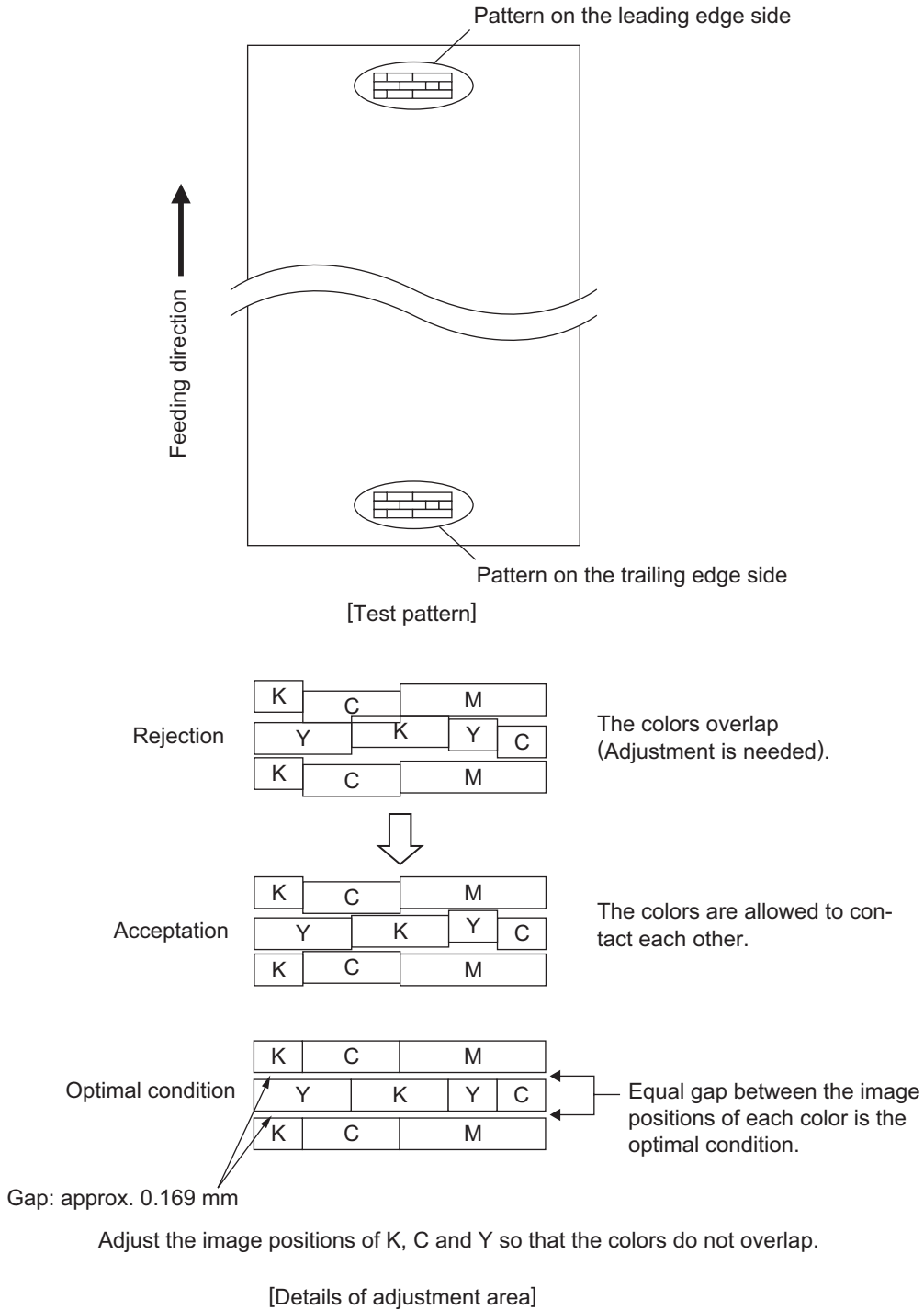


Fig.3-13

This adjustment should be applied for each printout of the test pattern. (Skip this if the test pattern is printed correctly.)

The order of the adjustment, test patterns and codes to be used are listed below.

| Order | Test pattern | Code |
|-------|--------------|------|
| 1 | 1st page | 417 |
| 2 | 2nd page | 418 |

- (1) While pressing the digital keys [0] and [5] simultaneously, turn the power ON. -> (Adjustment Mode)
- (2) Print out the test pattern and adjust its deviation amount (above). Use the image position of magenta (M) as a reference for adjustment. The image positions of yellow (Y), cyan (C) and black (K) must be adjusted with this reference.
 - Select A3/LD size. Key in "64" and then press the [FAX] button. -> 2 pages of the test pattern are printed out.
 - Check the image of the test pattern (above) and specify the color to be adjusted.
 - Key in the code (listed above) and press the [START] button.
 - Key in the sub code of the color to be adjusted and press the [START] button.
Sub code 0: Black (K) 1: Cyan (C) 3: Yellow (Y)
 - Key in the adjustment value and press the [ENTER] or [INTERRUPT] button.

Notes:

1. When the value increases by "1", the image shifts toward the trailing edge of the paper by 0.0423 mm.
2. Adjust the image positions of black (K), cyan (C) and yellow (Y) so that these colors do not overlap one another.
3. If patterns on both leading and trailing edges are not aligned, adjust the deviation amount of each edge so that it is made uniform. (i.e. Adjust it so as to make the upper-side gap of the pattern on the leading edge and lower-side gap of the pattern on the trailing edge equal, and to make the lower-side gap of the pattern on the leading edge and upper-side gap of the pattern on the trailing edge equal.)

- (3) Repeat Step (2) until all the test patterns are printed correctly.

Notes:

1. Since the adjusted value is reflected in that of the subsequent steps, be sure to perform the rest of the adjustment.
2. Print out the test pattern for each adjustment.

- (4) Turn the power OFF.

3.5.3 Density adjustment

The center density and the density variation controlled by density adjustment keys can be adjusted as follows.

<Adjustment Mode (05)>

| Color mode | Original mode | | | | | Item to be adjusted | Remarks |
|------------|---------------|------|---------------|-------|------|--------------------------------------|---|
| | Text/Photo | Text | Printed Image | Photo | Map | | |
| Full Color | 1550 | 1551 | 1552 | 1553 | 1554 | Manual density mode center value | The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128) |
| | 1560 | 1561 | 1562 | 1563 | 1564 | Manual density mode dark step value | The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255 (Default: 20) |
| | 1570 | 1571 | 1572 | 1573 | 1574 | Manual density mode light step value | The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255 (Default: 20) |
| | 1580 | 1581 | 1582 | 1583 | 1584 | Automatic density mode | The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128) |

<Adjustment Mode (05)>

| Color mode | Original mode | | | Item to be adjusted | Remarks |
|------------|---------------|------|-------|--------------------------------------|---|
| | Text/Photo | Text | Photo | | |
| Black | 503 | 504 | 501 | Manual density mode center value | The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128) |
| | 508 | 510 | 509 | Manual density mode dark step value | The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255 (Default: 20) |
| | 505 | 507 | 506 | Manual density mode light step value | The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255 (Default: 20) |
| | 514 | 515 | 512 | Automatic density mode | The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128) |

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment using the following procedure.

Note:

Be sure that this adjustment be made after performing "3.5.1 Automatic gamma adjustment".

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Key in a code and press the [START] button.
- (3) Key in an adjustment value (acceptable values: 0 to 255).
(To correct the value once keyed in, press the [CLEAR] button.)
- (4) Press the [ENTER] or [INTERRUPT] button to store the value. → The equipment goes back to the ready state.
- (5) Press the [FAX] button and then press the [START] button to make a test copy.
- (6) If the desired image has not been attained, repeat step (2) to (5).

3.5.4 Color balance adjustment

The color balance is adjusted by adjusting the density of each color at the Full Color Mode. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

| Color | Original mode | | | | | Item to be adjusted | Remarks |
|---------|---------------|--------|---------------|--------|--------|---------------------|---|
| | Text/Photo | Text | Printed Image | Photo | Map | | |
| Yellow | 1779-0 | 1780-0 | 1781-0 | 1782-0 | 1783-0 | Low density | The larger the value is, the darker the color to be adjusted becomes. Acceptable values: 0 to 255. (Default: 128) |
| | 1779-1 | 1780-1 | 1781-1 | 1782-1 | 1783-1 | Medium density | |
| | 1779-2 | 1780-2 | 1781-2 | 1782-2 | 1783-2 | High density | |
| Magenta | 1784-0 | 1785-0 | 1786-0 | 1787-0 | 1788-0 | Low density | |
| | 1784-1 | 1785-1 | 1786-1 | 1787-1 | 1788-1 | Medium density | |
| | 1784-2 | 1785-2 | 1786-2 | 1787-2 | 1788-2 | High density | |
| Cyan | 1789-0 | 1790-0 | 1791-0 | 1792-0 | 1793-0 | Low density | |
| | 1789-1 | 1790-1 | 1791-1 | 1792-1 | 1793-1 | Medium density | |
| | 1789-2 | 1790-2 | 1791-2 | 1792-2 | 1793-2 | High density | |
| Black | 1794-0 | 1795-0 | 1796-0 | 1798-0 | 1798-0 | Low density | |
| | 1794-1 | 1795-1 | 1796-1 | 1798-1 | 1798-1 | Medium density | |
| | 1794-2 | 1795-2 | 1796-2 | 1798-2 | 1798-2 | High density | |

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment using the following procedure.

Note:

Be sure that this adjustment be made after performing “3.5.1 Automatic gamma adjustment”.

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Key in the code of the mode to be adjusted (color and original mode) and press the [START] button.
- (3) Select the density area to be adjusted with digital keys (0, 1 or 2), and press the [START] button.
0: Low density (L)
1: Medium density (M)
2: High density (H)
- (4) Key in an adjustment value. (To correct the value once keyed in, press the [CLEAR] button.)
- (5) Press the [ENTER] or [INTERRUPT] button to store the value in memory.
→ The equipment goes back to the ready state.
- (6) For resetting the value, repeat step (2) to (5).
- (7) Press the [FAX] button and then press the [START] button to make a test copy.
- (8) If the desired image has not been attained, repeat step (2) to (7).

3.5.5 Gamma balance adjustment

The density adjustment at the Black Mode is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

| Color mode | Original mode | | | Item to be adjusted | Remarks |
|------------|---------------|-------|-------|---------------------|---|
| | Text/Photo | Text | Photo | | |
| Black | 590-0 | 591-0 | 592-0 | Low density | The larger the value is, the density of the item to be adjusted becomes darker. Acceptable values: 0 to 255. (Default: 128) |
| | 590-1 | 591-1 | 592-1 | Medium density | |
| | 590-2 | 591-2 | 592-2 | High density | |

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment using the following procedure.

Note:

Be sure that this adjustment be made after performing "3.5.1 Automatic gamma adjustment".

<Procedure>

Procedure is same as that of "3.5.4 Color balance adjustment".

3.5.6 Offsetting adjustment for background processing

The density of background and text can be adjusted as follows.

<Adjustment Mode (05)>

| Color mode | Original mode | | | | | Item to be adjusted | Remarks |
|------------|---------------|------|---------------|-------|------|---|---|
| | Text/Photo | Text | Printed Image | Photo | Map | | |
| Full Color | 1688 | 1689 | 1690 | 1691 | 1692 | Automatic density adjustment for background | The larger the value is, the darker the background becomes. (Automatic) Acceptable values: 0 to 255. (Default: 128) |
| | 1693 | 1694 | 1695 | 1696 | 1697 | Automatic density adjustment for text | The larger the value is, the darker the text becomes. (Automatic) Acceptable values: 0 to 255. (Default: 128) |
| | 1698 | 1699 | 1700 | 1701 | 1702 | Manual density adjustment for background | The larger the value is, the darker the background becomes. (Manual) Acceptable values: 0 to 255. (Default: 128) |
| | 1708 | 1709 | 1710 | 1711 | 1712 | Manual density adjustment for text | The larger the value is, the darker the text becomes. (Manual) Acceptable values: 0 to 255. (Default: 128) |

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment using the following procedure.

<Procedure>

Procedure is same as that of "3.5.2 Density adjustment".

3.5.7 Judgment threshold for ACS

The judgment level is adjusted for the automatic identification of whether the original set on the glass is black or color. Namely, this is to adjust the judgment level used when "Auto Color" is selected at a color mode. The adjustment is available for each of the manually-set original and the original used with the RADF.

<Adjustment Mode (05)>

| Code | Item to be adjusted | Contents |
|------|--|---|
| 1675 | Item to be adjusted Judgment threshold for ACS when original is set manually | The larger the value is, the more an original tends to be judged as black even at the Auto Color Mode. The smaller value is, the more it tends to be judged as color. Acceptable values: 0 to 255. (Default: 70) |
| 1676 | Judgment threshold for ACS when original is set on RADF | |

Make a test copy and compare the image obtained with the current settings; if necessary and make adjustment.

<Procedure>

Procedure is same as that of "3.5.3 Density adjustment".

3.5.8 Sharpness adjustment

If you want to make copy images look softer or sharper, perform the following adjustment. The adjustment can be made for each of the color modes and original modes independently.

<Adjustment Mode (05)>

| Code | Color mode | Original mode | Contents |
|------|------------|---------------|--|
| 1737 | Full Color | Text/Photo | <ul style="list-style-type: none"> The larger the value is, the sharper the image becomes; while the smaller the value is, the softer the image becomes. The smaller the value is, the less moire tends to appear. The acceptable values are 0 to 31. The center value is 16. However, 0 is equivalent to the center value. |
| 1738 | | Text | |
| 1739 | | Printed Image | |
| 1740 | | Photo | |
| 1741 | | Map | |
| 604 | Black | Text/Photo | |
| 605 | | Text | |
| 606 | | Photo | |
| 1757 | Auto Color | Text/Photo | |

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

Note:

You have to make adjustment by balancing between moire and sharpness.

<Procedure>

Procedure is same as that of "3.5.3 Density adjustment".

3.5.9 Setting range correction

The values of the background peak/text peak in the range correction at the Black Mode can be switched to "varied" or "fixed" in the following codes.

If they are fixed, the range correction is performed with standard values.

The values of the background peak affects the reproduction of the background density, and the values of the text peak affects that of the text density.

<Adjustment Mode (05)>

| Original mode | | | Item to be adjusted | Remarks | | | | | | | | | | | | | | | |
|---------------|-----------------|-----------|--|---|--|-----------------|-----------|----|-------|-------|----|--------|-------|----|-------|--------|----|--------|--------|
| Text/Photo | Photo | Text | | | | | | | | | | | | | | | | | |
| 570 | 571 | 572 | Range correction for original manually set on the original glass | The following are the default values set for each original mode. Text/Photo: 22, Photo: 12, Text: 22 Each digit stands for: One's place: Automatic density mode Ten's place: Manual density mode The setting conditions possible are as follows: <table style="margin-left: 20px;"> <tr> <td></td> <td>Background peak</td> <td>Text peak</td> </tr> <tr> <td>1:</td> <td>fixed</td> <td>fixed</td> </tr> <tr> <td>2:</td> <td>varied</td> <td>fixed</td> </tr> <tr> <td>3:</td> <td>fixed</td> <td>varied</td> </tr> <tr> <td>4:</td> <td>varied</td> <td>varied</td> </tr> </table> | | Background peak | Text peak | 1: | fixed | fixed | 2: | varied | fixed | 3: | fixed | varied | 4: | varied | varied |
| | Background peak | Text peak | | | | | | | | | | | | | | | | | |
| 1: | fixed | fixed | | | | | | | | | | | | | | | | | |
| 2: | varied | fixed | | | | | | | | | | | | | | | | | |
| 3: | fixed | varied | | | | | | | | | | | | | | | | | |
| 4: | varied | varied | | | | | | | | | | | | | | | | | |
| 693 | 694 | 695 | Range correction for original set on the RADF | | | | | | | | | | | | | | | | |

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

<Procedure>

Procedure is same as that of "3.5.3 Density adjustment".

3.5.10 Setting range correction (Adjustment of background peak)

The levels of the background peak for the range correction at a Black Mode can be set at the following codes.

<Adjustment Mode (05)>

| Original mode | | | Item to be adjusted | Remarks |
|---------------|-------|------|--------------------------------------|---|
| Text/Photo | Photo | Text | | |
| 532 | 533 | 534 | Background peak for range correction | When the value increases, the background (low density area) of the image is not output. Acceptable values: 0 to 255. (Default: Text/Photo: 40, Photo: 16, Text: 40) |

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

<Procedure>

Procedure is same as that of "3.5.3 Density adjustment".

3.5.11 Adjustment of smudged/faint text

The smudge/faint text at a Black Mode can be set at the following codes.

<Adjustment Mode (05)>

| Original mode | Item to be adjusted | Remarks |
|---------------|-----------------------------------|--|
| Text/Photo | | |
| 648 | Adjustment of smudged/ faint text | When the value increases, the faint text is improved. When the value decreases, the smudged text is improved. Acceptable values: 0 to 255. (Default: 30) |

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

Note:

Remember the image specifications and life span of the replacing parts may not meet the standard when the setting value is changed from the default value.

<Procedure>

Procedure is same as that of "3.5.3 Density adjustment".

3.5.12 Adaptation to highlighter

Four modes of one touch adjustment are performed and each mode can be switched into two modes; highlighter 1 or 2. This adjustment is performed when the reproduction mode for highlighter is needed.

<Adjustment Mode (05)>

| Code | One touch adjustment | Remarks |
|------|----------------------|--|
| 1769 | Vivid | 0: Default (Vivid / Clear / Warm / Cool) 1: Highlighter 1 2: Highlighter 2 |
| 1770 | Clear | |
| 1771 | Warm | |
| 1772 | Cool | |

Note:

The color may not always be reproduced precisely due to the characteristics of fluorescent ink.

3.5.13 Beam level conversion setting

The beam level for 4 divided smoothing is set at the Black Mode. This adjustment enables to adjust the dot size.

<Adjustment Mode (05)>

| Code | One touch adjustment | Remarks |
|-------|----------------------|--|
| 667-0 | Beam level 0/4 | The smaller the value is, the smaller the beam width becomes. Therefore, the smaller dot is reproduced accordingly. Acceptable values: 0 to 255. (Default: Level 0/4: 0, Level 1/4: 63, Level 2/4: 127, Level 3/4: 191, Level 4/4: 255) |
| 667-1 | Beam level 1/4 | |
| 667-2 | Beam level 2/4 | |
| 667-3 | Beam level 3/4 | |
| 667-4 | Beam level 4/4 | |

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment using the following procedure.

<Procedure>

Procedure is same as that of "3.5.4 Color balance adjustment".

Notes:

1. When this adjustment is performed, "3.5.1 Automatic gamma adjustment (Black Mode)" (05-580) needs to be performed since the reproduction of density at Black Mode varies. The result of this adjustment is not reflected to color/black integrated pattern. Namely, each automatic gamma adjustment of Black Mode (05-580) or of Color Mode (05-1643) needs to be performed individually after this adjustment.
2. After this adjustment, set "1" in 08-595 so that the correction result of the Black Mode is not reflected on "Automatic Calibration".
3. The setting value must increase as the beam level number (0 to 4) becomes higher. Do not increase this order when setting the values.
4. Usually, beam level 4 is most effective on all black modes.

3.5.14 Maximum toner density adjustment to paper type

The maximum toner amount adhering to the paper can be controlled.

<Adjustment Mode (05)>

| Code | Paper type | Remarks |
|------|---------------|--|
| 1612 | Plain paper | The smaller the value is, the toner amount adhered decreases of the high density area (ex. prevention of fusing offsetting, etc). Acceptable values : 0 to 255. (Default: Plain paper: 255, Thick paper 1: 249, Thick paper 2: 237, Thick paper 3: 237, OHP film: 249) |
| 1613 | Thick paper 1 | |
| 1614 | Thick paper 2 | |
| 1615 | Thick paper 3 | |
| 1616 | OHP film | |

Note:

The larger the value is, the more frequently fusing offsetting occurs.

3.5.15 Maximum text density adjustment

The maximum text density of each color at Full Color Mode can be adjusted as follows.

<Adjustment Mode (05)>

| Color | Code | Item to be adjusted | Remarks |
|---------|------|----------------------|---|
| Yellow | 1630 | Maximum text density | The larger the value is, the darker the maximum text density of each color to be adjusted becomes. Acceptable values: 0 to 10 (Default: 5) |
| Magenta | 1631 | | |
| Cyan | 1632 | | |
| Black | 1633 | | |

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment using the following procedure.

Note:

Be sure that this adjustment be made after performing "3.5.1 Automatic gamma adjustment".

<Procedure>

Procedure is same as that of "3.5.3 Density adjustment".

3.5.16 Text/Photo reproduction level adjustment

Text/Photo reproduction level at the Full color mode, Auto color mode and Gray scale mode can be adjusted.

Text/Photo reproduction level adjustment can be switched to "Photo oriented 1", "Photo oriented 2", "Text oriented 1" or "Text oriented 2" in the following codes.

<Adjustment Mode (05)>

| Mode | | Item to be adjusted | Contents |
|------------|--|--|---|
| Text/Photo | | | |
| 1725 | | Text/Photo reproduction level adjustment | 0: Default 1: Photo oriented 2 (The printed image reproduction level higher than that of the Photo oriented 1) 2: Photo oriented 1 (The printed image reproduction level higher than that of the Default) 3: Equivalent to the Default 4: Text oriented 1 (The text reproduction level higher than that of the Default) 5: Text oriented 2 (The text reproduction level higher than that of the Text oriented 1) |

Notes:

- The text reproduction level is lower when the mode is switched from the default value to the Photo oriented 1 or Photo oriented 2. (The text reproduction level in Photo oriented 2 is lower than that in Photo oriented 1.)
- Changing the setting value from default value to the Text oriented 1 or Text oriented 2 causes image noise in the printed photo image with few lines per inch. (Photo oriented 2 causes more image noise than Photo oriented 1.)

3.5.17 Black reproduction switching at the Twin color copy mode

Black reproduction can be switched at the Twin color (Black/Red) copy mode.

<Adjustment Mode (05)>

| Mode | Item to be adjusted | Contents |
|----------------------------------|------------------------------|--|
| Twin color copy mode (Black/Red) | | |
| 1761 | Black reproduction switching | 0: Default 1: Black reproduction oriented |

Note:

The boundary between Red and Black may not be smooth when the setting value is "1".

3.5.18 Background adjustment(Black Mode)

Background of the gamma data can be adjusted with the following codes.

<Adjustment Mode (05)>

| Original mode | | | Item to be adjusted | Remarks |
|---------------|-------|------|-----------------------|--|
| Text/Photo | Photo | Text | | |
| 600 | 602 | 601 | Background adjustment | 1 to 9: The larger the value is, the background becomes lighter. |

<Procedure>

Procedure is same as that of "3.5.3 Density adjustment".

3.6 Image Quality Adjustment (Printing Function)

3.6.1 Automatic gamma adjustment

When the reproduction of gradation is not appropriate, the gradation reproducibility of all colors Y, M, C and K can be corrected by performing this automatic gamma adjustment. In case the gradation reproduction of the image checked is not satisfactory, make this adjustment as described below at parts replacement.

1) When unpacking or any of the following parts has been unpacked or replaced, be sure to make this adjustment:

- Laser optical unit
- Main charger wire
- 1st transfer roller
- Image Quality sensor
- Photoconductive drum
- Main charger grid
- Drum cleaning blade
- Developer material
- Transfer belt
- Drum cleaner brush

2) When any of the following parts are replaced or adjusted, make a print and check the image to determine if adjustment is necessary:

- 2nd transfer roller

Note:

Be sure that this adjustment be made after performing the image adjustment in "3.3 Adjustment of Image Quality Control" and "3.4 Image Dimensional Adjustment".

<Adjustment Mode (05)>

| Color | Code | Remarks | | | | | | | | | | | | | | | |
|------------------------------|----------------------------------|---|-------------|---------------------|---------|----|---------------|---------------------------|-----|----------------|---------------------------|----|----------------|---------------------------|-----|-----------------|---------------------------|
| 1000 1001 1002 1003 | Automatic gamma adjustment | <p><Procedure></p> <p>1) While pressing [0] and [5] simultaneously, turn the power ON. ? Adjustment Mode</p> <p>2) Select the A4/LT drawer. Key in the pattern number and press the [FAX] button to output a "Patch chart for gamma adjustment".</p> <table border="1"> <thead> <tr> <th>Pattern No.</th> <th>Language/Resolution</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>47</td> <td>PS/600x600dpi</td> <td>When performing code 1000</td> </tr> <tr> <td>48*</td> <td>PS/1200x600dpi</td> <td>When performing code 1001</td> </tr> <tr> <td>49</td> <td>PCL/600x600dpi</td> <td>When performing code 1002</td> </tr> <tr> <td>50*</td> <td>PCL/1200x600dpi</td> <td>When performing code 1003</td> </tr> </tbody> </table> <p>* Perform the adjustment only when the expansion memory has been installed.</p> <p>3) Place the patch chart for adjustment printed in step (2) face down on the original glass, with its side, on which two black squares are present, aligned against the original scale.</p> <p>4) Key in a code and press the [START] button. ? The scanner reads the chart automatically and performs automatic gamma adjustment calculation (approx. 30 sec.).</p> <p>5) When the adjustment has finished normally, "ENTER" is shown. Press the [ENTER] button to have the adjustment results reflected. (To cancel the reflection of adjustment results, press the [CANCEL] button.) In the case of an abnormal ending, "ADJUSTMENT ERROR" is shown. Press the [CANCEL] button to clear the error display. When it is cleared, the control panel display will return to the ready state. Then, check if the patch chart on the original glass is placed in the wrong direction or if it is placed inclined on the original glass, and then repeat step (3) and afterward.</p> | Pattern No. | Language/Resolution | Remarks | 47 | PS/600x600dpi | When performing code 1000 | 48* | PS/1200x600dpi | When performing code 1001 | 49 | PCL/600x600dpi | When performing code 1002 | 50* | PCL/1200x600dpi | When performing code 1003 |
| Pattern No. | Language/Resolution | Remarks | | | | | | | | | | | | | | | |
| 47 | PS/600x600dpi | When performing code 1000 | | | | | | | | | | | | | | | |
| 48* | PS/1200x600dpi | When performing code 1001 | | | | | | | | | | | | | | | |
| 49 | PCL/600x600dpi | When performing code 1002 | | | | | | | | | | | | | | | |
| 50* | PCL/1200x600dpi | When performing code 1003 | | | | | | | | | | | | | | | |

3.6.2 Color deviation adjustment

The color deviation amount of the secondary scanning direction can be adjusted.

For the adjustment procedures, see Chapter 3.5.2 “Color Deviation Adjustment”.

Note:

Since color deviation adjustment in the copying function is in common with that in the printer function, it does not need to be done if already performed in the copying function.

3.6.3 Gamma balance adjustment (Black Mode)

The gamma balance is adjusted by adjusting the density at the Black Mode. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.
<Adjustment Mode (05)>

| Color mode | Language and screen | | | | Item to be adjusted | Remarks |
|------------|---------------------|-------------|----------------|--------------|---------------------|---|
| | Smooth h (PS) | Detail (PS) | Smooth h (PCL) | Detail (PCL) | | |
| Black | 596-0 | 597-0 | 598-0 | 599-0 | Low density | The larger the value is, the density of the item to be adjusted becomes darker. Acceptable values: 0 to 255. (Default: 128) |
| | 596-1 | 597-1 | 598-1 | 599-1 | Medium density | |
| | 596-2 | 597-2 | 598-2 | 599-2 | High density | |

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Key in the codes to be adjusted (language and screen) and press the [START] button.
- (3) Key in the value corresponding to the density area to be adjusted (0, 1 or 2) and press the [START] button.
0: Low density (L) 1: Medium density (M) 2: High density (H)
- (4) Key in the adjustment value. (To correct the value once keyed in, press [CLEAR] button.)
- (5) Press the [ENTER] or [INTERRUPT] button to store the value in memory. ? The equipment goes back to the ready state.
- (6) For resetting the value, repeat step (2) to (5).
- (7) Let the equipment restart and perform printing job.
- (8) If the image density has not been attained, repeat step (1) to (7).

3.6.4 Color balance adjustment (Color Mode)

The color balance is adjusted by adjusting the density of each color. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

| Color | PS | | | | PCL | | | | Density | Remarks |
|---------|------------|--------|-------------|--------|------------|--------|-------------|--------|---------|---|
| | 600x600dpi | | 1200x600dpi | | 600x600dpi | | 1200x600dpi | | | |
| | Smooth | Detail | Smooth | Detail | Smooth | Detail | Smooth | Detail | | |
| Yellow | 1010-0 | 1014-0 | 1018-0 | 1022-0 | 1026-0 | 1030-0 | 1034-0 | 1038-0 | Low | The larger the value is, the darker the color to be adjusted becomes. Acceptable values: 0 to 255. (Default: 128) |
| | 1010-1 | 1014-1 | 1018-1 | 1022-1 | 1026-1 | 1030-1 | 1034-1 | 1038-1 | Medium | |
| | 1010-2 | 1014-2 | 1018-2 | 1022-2 | 1026-2 | 1030-2 | 1034-2 | 1038-2 | High | |
| Magenta | 1011-0 | 1015-0 | 1019-0 | 1023-0 | 1027-0 | 1031-0 | 1035-0 | 1039-0 | Low | |
| | 1011-1 | 1015-1 | 1019-1 | 1023-1 | 1027-1 | 1031-1 | 1035-1 | 1039-1 | Medium | |
| | 1011-2 | 1015-2 | 1019-2 | 1023-2 | 1027-2 | 1031-2 | 1035-2 | 1039-2 | High | |
| Cyan | 1012-0 | 1016-0 | 1020-0 | 1024-0 | 1028-0 | 1032-0 | 1036-0 | 1040-0 | Low | |
| | 1012-1 | 1016-1 | 1020-1 | 1024-1 | 1028-1 | 1032-1 | 1036-1 | 1040-1 | Medium | |
| | 1012-2 | 1016-2 | 1020-2 | 1024-2 | 1028-2 | 1032-2 | 1036-2 | 1040-2 | High | |
| Black | 1013-0 | 1017-0 | 1021-0 | 1025-0 | 1029-0 | 1033-0 | 1037-0 | 1041-0 | Low | |
| | 1013-1 | 1017-1 | 1021-1 | 1025-1 | 1029-1 | 1033-1 | 1037-1 | 1041-1 | Medium | |
| | 1013-2 | 1017-2 | 1021-2 | 1025-2 | 1029-2 | 1033-2 | 1037-2 | 1041-2 | High | |

Note:

Be sure that this adjustment be made after performing "3.6.1 Automatic gamma adjustment".

<Procedure>

Procedure is same as that of "3.6.3 Gamma balance adjustment".

3.6.5 Adjustment of smudged/faint text

The smudged/faint text at the Black Mode is adjusted.

<Adjustment Mode (05)>

| Language | | Remarks |
|----------|-----|--|
| PS | PCL | |
| 654 | 655 | When the value increases, the smudged text is improved. When the value decreases, the faint text is improved. Acceptable values: 0 to 9 (Default: 5) |

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Key in the codes to be adjusted and press the [START] button.
- (3) Key in the adjustment value. (To correct the value once keyed in, press [CLEAR] button.)
- (4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. ? The equipment goes back to the ready state.
- (5) For resetting the value, repeat step (2) to (4).
- (6) Let the equipment restart and perform printing job.
- (7) If the desired image has not been attained, repeat step (1) to (6).

3.6.6 Upper limit value at Toner Saving Mode

The upper limit value is adjusted at the Toner Saving Mode.

<Adjustment Mode (05)>

| Black mode | | Language | | | | Remarks |
|------------|-----|------------|-------------|------------|-------------|---|
| PS | PCL | PS | PS | PCL | PCL | |
| | | 600x600dpi | 1200x600dpi | 600x600dpi | 1200x600dpi | |
| 664 | 665 | 1055 | 1056 | 1057 | 1058 | The smaller the value is, the lighter the density of image becomes. Acceptable values: 0 to 255. (Default: 176) |

<Procedure>

Procedure is same as that of "3.6.5 Adjustment of smudged/faint text".

3.6.7 Dot size adjustment in black printing

The dot size is adjusted in primary scanning direction in black printing.

<Adjustment Mode (05)>

| Code | Remarks |
|------|--|
| 663 | The smaller the value is, the dot size becomes smaller. Acceptable values: 0 to 255. (Default: 255) |

<Procedure>

Procedure is same as that of "3.6.5 Adjustment of smudged/faint text".

3.6.8 Maximum toner density adjustment to paper type

The maximum toner amount adhering to the paper can be controlled.

<Adjustment Mode (05)>

| Code | | Paper type | Remarks |
|--------|--------|---------------|--|
| PS | PCL | | |
| 1046-0 | 1046-1 | Plain paper | The smaller the value is, the toner amount adhered decreases of the high density area (ex. prevention of fusing offsetting, etc). Acceptable values: 0 to 255. (Default: Plain paper: 255, Thick paper 1: 255, Thick paper 2: 255, Thick paper 3: 255, OHP film: 200) |
| 1047-0 | 1047-1 | Thick paper 1 | |
| 1048-0 | 1048-1 | Thick paper 2 | |
| 1049-0 | 1049-1 | Thick paper 3 | |
| 1050-0 | 1050-1 | OHP film | |

<Procedure>

Procedure is same as that of "3.6.3 Gamma balance adjustment".

Note:

The larger the value is, the more frequently fusing offsetting occurs.

3.6.9 Image processing: Gamma correction table all clearing

The state of calibration in color printing mode is initialized at the Setting Mode (08-597). This setting is to be performed when a defect occurs in "Automatic gamma adjustment (05-1000 to 1003)". The cause of defect is presumed as an image failure (jittering or uneven image density) at the patch chart for gamma adjustment.

3.7 Image Quality Adjustment (Scanning Function)

3.7.1 Gamma balance adjustment

The gamma balance at the Black Mode is adjusted by adjusting the density. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

| Item to be adjusted | Original mode | | | Gray Scale mode | Remarks |
|---------------------|------------------|------------|-------------|-----------------|---|
| | Black Text/Photo | Black Text | Black Photo | | |
| Low density | 880-0 | 881-0 | 882-0 | 883-0 | The larger the value is, the density of the item to be adjusted becomes darker. Acceptable values: 0 to 255. (Default: 128) |
| Medium density | 880-1 | 881-1 | 882-1 | 883-1 | |
| High density | 880-2 | 881-2 | 882-2 | 883-2 | |

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Key in the code corresponding to the desired original mode and press the [START] button.
- (3) Key in the value corresponding to the density area to be adjusted (0, 1 or 2) and press the [START] button.
0: Low density (L), 1: Medium density (M), 2: High density (H)
- (4) Key in the adjustment value. (To correct the value once keyed in, press [CLEAR] button.)
- (5) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
- (6) For resetting the value, repeat step (2) to (5).
- (7) Let the equipment restart and perform scanning job.
- (8) If the desired image has not been attained, repeat step (1) to (7).

3.7.2 Density adjustment (Black Mode)

Adjusts the center density and the variation of density adjustment buttons.

<Adjustment Mode (05)>

| Color mode | Original mode | | | Item to be adjusted | Remarks |
|------------|---------------|------|-------|---------------------------------|--|
| | Text/Photo | Text | Photo | | |
| Black | 845 | 846 | 847 | Manual density center value | The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128) |
| | 855 | 856 | 857 | Manual density dark step value | The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255 (Default: 20) |
| | 850 | 851 | 852 | Manual density light step value | The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255 (Default: 20) |
| | 860 | 861 | 862 | Automatic density | The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128) |

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Key in a code and press the [START] button.
- (3) Key in an adjustment value (acceptable values: 0 to 255).
(To correct the value once keyed in, press the [CLEAR] button.)
- (4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
- (5) Let the equipment restart and perform scanning job.
- (6) If the desired image has not been attained, repeat step (1) to (5).

3.7.3 Background adjustment (Gray Scale Mode)

The adjustment level of background center value and the control of background adjustment button are adjusted.

<Adjustment Mode (05)>

| Code | Item to be adjusted | Remarks |
|------|---------------------|---|
| 848 | Center value | The larger the value is, the background becomes darker. The smaller the value is, the background becomes lighter. Acceptable values: 0 to 255 (Default: 128) |
| 858 | Dark step value | The larger the value is, the image of the "dark" steps becomes darker. Acceptable values: 0 to 255 (Default: 50) |
| 853 | Light step value | The larger the value is, the image of the "light" steps becomes lighter. Acceptable values: 0 to 255 (Default: 50) |

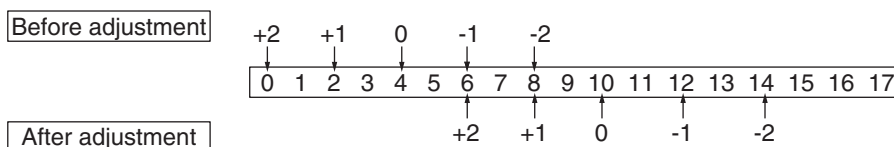
<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Key in the codes and press the [START] button.
- (3) Key in the adjustment values. Acceptable values : 0 to 255. (To correct the value once keyed in, press [CLEAR] button.)
- (4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
- (5) Let the equipment restart and perform scanning job.
- (6) If the desired image has not been attained, repeat step (1) to (5).

3.7.4 Background adjustment (Color Mode)

The adjustment level of background center value is adjusted. The control value of background adjustment button is automatically adjusted to the same level as the adjusted center value.

For example, when the control value of background adjustment key ranges from 0 to 6, the background center value (-2 to +2) is used to be the range from 6 to 14 accordingly.



| Code | Original mode | Remarks |
|------|---------------|---|
| 1070 | Text | The larger the value is, the background becomes lighter. Acceptable values: 0 to 50 (Default: 0) |
| 1071 | Printed Image | |
| 1072 | Photo | |

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Key in the codes and press the [START] button.
- (3) Key in the adjustment values. Acceptable values : 0 to 50. (To correct the value once keyed in, press [CLEAR] button.)
- (4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
- (5) Let the equipment restart and perform scanning job.
- (6) If the desired image has not been attained, repeat step (1) to (5).

3.7.5 Judgment threshold for ACS

The judgment level is adjusted for the automatic identification of whether the original set on the glass is black or color. Namely, this is to adjust the judgment level used when "Auto Color" is selected at color modes. The adjustment is available for both the manually-set original and the original used with the RADF.

<Adjustment Mode (05)>

| Code | Item to be adjusted | Contents |
|------|--|--|
| 1065 | Judgment threshold for ACS when original is set manually | The larger the value is, the more an original tends to be judged as black even at the Auto Color Mode. The smaller the value is, the more it tends to be judged as color. Acceptable values: 0 to 255 (Default: 70) |
| 1066 | Judgment threshold for ACS when original is set on RADF | |

<Procedure>:

Procedure is same as that of "3.7.2 Density adjustment (Black Mode)".

3.7.6 Sharpness adjustment

If you want to make scan images look softer or sharper, perform the following adjustment. The adjustment can be made for each of the color modes and original modes independently.

<Adjustment Mode (05)>

| Code | Color mode | Original mode | Contents |
|------|------------|---------------|--|
| 1086 | Full Color | Text | <ul style="list-style-type: none"> The larger the value is, the sharper the image becomes; while the smaller the value is, the softer the image becomes. The smaller the value is, the less moire tends to appear. The acceptable values are 0 to 31. The center value is 16. However, 0 is equivalent to the center value. |
| 1087 | | Printed Image | |
| 1088 | | Photo | |
| 840 | Black | Text/Photo | |
| 841 | | Text | |
| 842 | | Photo | |
| 843 | Gray Scale | - | |

Note:

You have to make adjustment by balancing between moire and sharpness.

<Procedure>

Procedure is same as that of "3.7.2 Density adjustment (Black Mode)".

3.7.7 Setting range correction

The values of the background peak / text peak in the range correction at the Black Mode can be switched to "varied" or "fixed" in the following codes.

If they are fixed, the range correction is performed with standard values.

The values of the background peak affects the reproduction of the background density and the values of the text peak affects that of the text density.

<Adjustment Mode (05)>

| Black | | | Gray Scale | Item to be adjusted | Remarks | | | | | | | | | | |
|-----------------|-----------|-------|------------|--|--|-----------------|-----------|----------|-------|-----------|-------|----------|--------|-----------|--------|
| Original mode | | | | | | | | | | | | | | | |
| Text/Photo | Text | Photo | | | | | | | | | | | | | |
| 825 | 826 | 827 | 828 | Range correction for original manually set on the original glass | The following are the default values set for each original mode. Photo/Text: 12, Text: 12, Photo: 12, Gray Scale: 12 Each digit stands for: Ones place: Automatic density mode Tens place: Manual density mode The setting conditions possible are as follows: | | | | | | | | | | |
| 830 | 831 | 832 | 833 | Range correction for original set on the RADF | <table style="margin-left: 40px;"> <tr> <td>Background peak</td> <td>Text peak</td> </tr> <tr> <td>1: fixed</td> <td>fixed</td> </tr> <tr> <td>2: varied</td> <td>fixed</td> </tr> <tr> <td>3: fixed</td> <td>varied</td> </tr> <tr> <td>4: varied</td> <td>varied</td> </tr> </table> | Background peak | Text peak | 1: fixed | fixed | 2: varied | fixed | 3: fixed | varied | 4: varied | varied |
| Background peak | Text peak | | | | | | | | | | | | | | |
| 1: fixed | fixed | | | | | | | | | | | | | | |
| 2: varied | fixed | | | | | | | | | | | | | | |
| 3: fixed | varied | | | | | | | | | | | | | | |
| 4: varied | varied | | | | | | | | | | | | | | |

<Procedure>

Procedure is same as that of "3.7.2 Density adjustment (Black Mode)".

3.7.8 Setting range correction (Adjustment of background peak)

The levels of the background peak for the range correction at the Black Mode can be set at the following codes.

<Adjustment Mode (05)>

| Black | | | Gray Scale | Item to be adjusted | Remarks |
|---------------|------|-------|------------|--------------------------------------|--|
| Original mode | | | | | |
| Text/Photo | Text | Photo | | | |
| 835 | 836 | 837 | 838 | Background peak for range correction | When the value increases, the background (low density section) of the image is not output. Acceptable vales: 0 to 255 (Default: Text/Photo: 56, Text: 48, Photo: 16, Gray Scale: 32) |

<Procedure>

Procedure is same as that of "3.7.2 Density adjustment (Black Mode)".

3.7.9 Fine adjustment of black density

The density of black side on scanned image is adjusted at color-scanning.

<Adjustment Mode (05)>

| Code | Original mode | Remarks |
|------|---------------|--|
| 1075 | Text | The larger the value is, the black side of the image becomes darker. Acceptable values: 0 to 4 (Default: 0) |
| 1076 | Printed Image | |
| 1077 | Photo | |

Note:

Be careful for the value not to be too large since the gradation is reproduced worse in darker side.

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Key in the codes and press the [START] button.
- (3) Key in the adjustment values. Acceptable values : 0 to 4. (To correct the value once keyed in, press [CLEAR] button.)
- (4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. ? The equipment goes back to the ready state.
- (5) Let the equipment restart and perform scanning job.
- (6) If the desired image has not been attained, repeat step (1) to (5).

3.7.10 RGB conversion method selection

The color space conversion method of image is decided at color-scanning.

<Adjustment Mode (05)>

| Code | Original mode | Remarks |
|------|---------------|--|
| 1080 | Text | Remarks 0: sRGB, 1: AppleRGB, 2: ROMMRGB, 3: AdobeRGB (Default: 0) |
| 1081 | Printed Image | |
| 1082 | Photo | |

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Key in the codes and press the [START] button.
- (3) Key in the adjustment values. Acceptable values : 0 to 3. (To correct the value once keyed in, press [CLEAR] button.)
- (4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. ? The equipment goes back to the ready state.
- (5) Let the equipment restart and perform scanning job.
- (6) If the desired image has not been attained, repeat step (1) to (5).

3.7.11 Reproduction ratio of primary scanning direction (black)

The reproduction ratio of primary scanning direction with the resolution other than 600 dpi is adjusted in Scanning Function for black image.

<Adjustment Mode (05)>

| Code | Remarks |
|------|--|
| 884 | When the value increases, the image is zoomed in. When the value decreases, the image is zoomed out. Acceptable values: 0 to 255 (Default: 128) * 0.1%/step |

<Procedure>

Procedure is same as that of "3.7.2 Density adjustment".

3.7.12 Reproduction ratio of primary scanning direction (color)

The reproduction ratio of primary scanning direction with the resolution other than 600 dpi is adjusted in Scanning Function for color image.

<Adjustment Mode (05)>

| Code | Remarks |
|------|--|
| 1060 | When the value increases, the image is zoomed in. When the value decreases, the image is zoomed out. Acceptable values: 0 to 255 (Default: 128) * 0.1%/step |

<Procedure>

Procedure is same as that of "3.7.2 Density adjustment".

3.8 High-Voltage Transformer Setting

3.8.1 General description

The high-voltage transformers (PS-HVT-350) supply high-voltage to the parts related to charging, development, transfer and drum cleaning.

The high-voltage transformer has the following high-voltage outputs.

- CH1: Main charger wire
- CH2: Main charger grid bias
- CH3: Color developer bias
- CH4: Black developer bias
- CH5: 1st transfer roller bias
- CH6: 2nd transfer roller bias
- CH7: Cleaning blade bias

Note:

Make sure not to lose the data sheets which are attached to the high-voltage transformers. Use these sheets for the following setting.

Never move the fixed volumes of resistors since output adjustment is performed when the devices are shipped.

3.8.2 Setting at the replacement of high-voltage transformer

After replacing a high-voltage transformer, be sure to enter the data shown on the data sheets (main charger grid bias, color/black developer bias and 1st/2nd transfer roller bias) noted above according to the following procedure.

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Key in the adjusting codes in the table below and press the [START] button.
- (3) Key in the adjusting value corresponding to each code on the attached sheets, and then press [ENTER] or [INTERRUPT].

<Adjustment Mode (05)>

| Adjusting code | Item to be adjusted | Adjusting value |
|----------------|--|--------------------------|
| 334 | Main charger grid bias lower limit value | Refer to the data sheets |
| 335 | Main charger grid bias upper limit value | |
| 338 | Color developer bias lower limit value | |
| 339 | Color developer bias upper limit value | |
| 372 | Black developer bias lower limit value | |
| 373 | Black developer bias upper limit value | |
| 250 | 1st transfer roller bias lower limit value | |
| 251 | 1st transfer roller bias upper limit value | |
| 252 | 2nd transfer roller bias lower limit value (+) | |
| 253 | 2nd transfer roller bias upper limit value (+) | |

- (4) Key in all the codes in the above table by repeating (2) and (3).
- (5) Turn the power OFF.

3.9 Adjustment of the Scanner Section

3.9.1 Carriages

- (1) Installing carriage wires
When replacing the carriage wires, refer illustrations below:

[Front side]

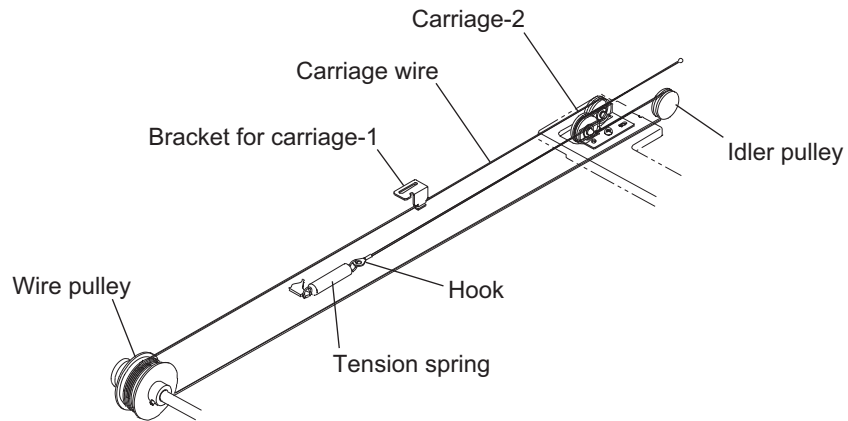


Fig.3-14

[Rear side]

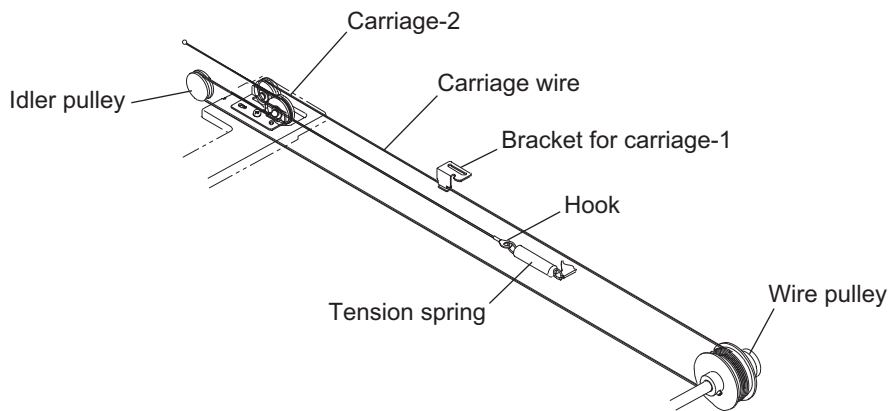


Fig.3-15

Adjustment of the carriage wire tension is not necessary since a certain tension is applied to the carriage wires by the tension springs.

Note:

Make sure the tension applied to the wire is normal.

(2) Adjusting carriages-1 and -2 positions

- Move the carriage-2 toward the exit side.
- Loosen the screws fixing the front side pulley bracket, make the sections A and B of the carriage-2 touch with the inside of the exit side frame and screw them up.

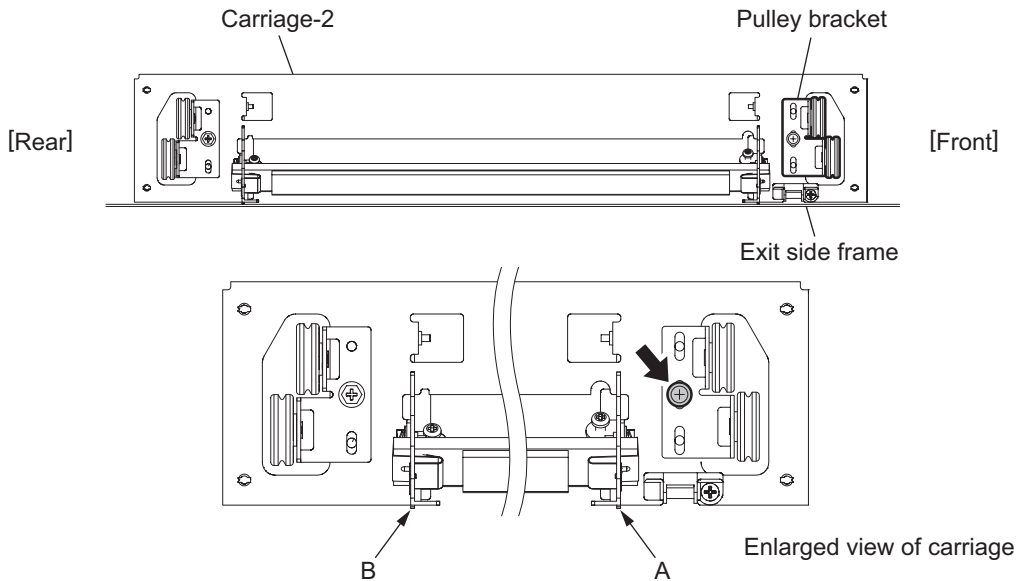


Fig.3-16

- Put the carriage-1 on the rail, make the sections C and D of it touch with the inside of the exit frame and screw up the front/rear side of the bracket to fix it.

Note:

Make sure that the sections A and B of the carriage-2 touch with the exit side frame.

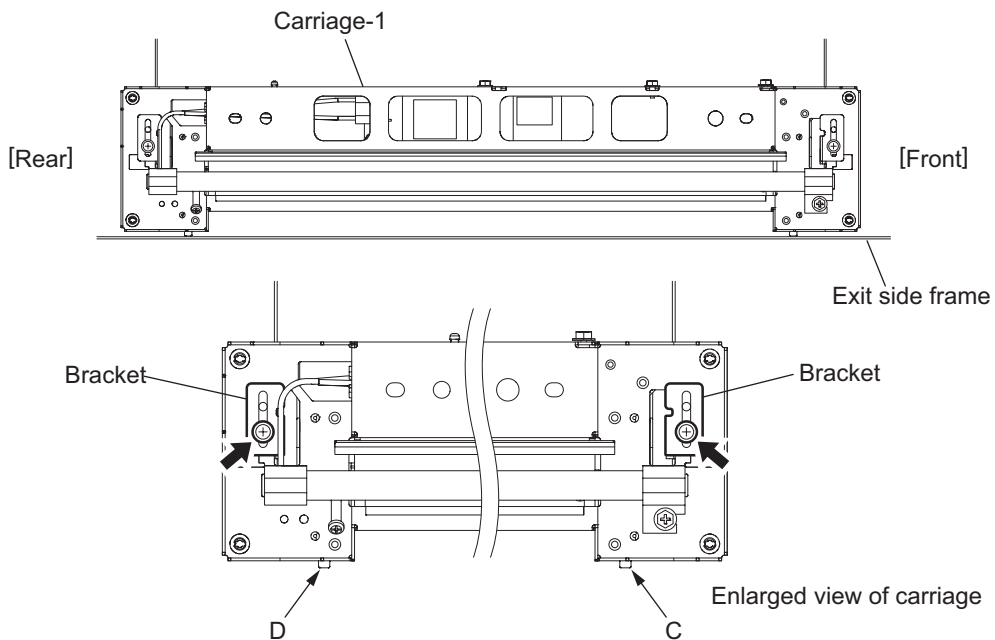


Fig.3-17

(3) Assembling carriage wires

Winding the wire around the wire pulley:

- Pull the $\varnothing 3$ ball terminal located at the center of the wire into a hole on the wire pulley. One end of the wire with a hook attached comes to the outside.
- Wind the wires around the wire pulleys of the front and rear sides. The number of turns to be wound are as follows:
 - 2 turns toward the opposite side of the boss
 - 4 turns toward the boss side

Notes:

Pay attention to the followings when the wires are wound around the pulleys:

- Do not twist the wire.
- Wind the wires tightly so that they are in complete contact with the surface of the pulleys.
- Each turn should be pushed against the previously wound turn so that there is no space between them.

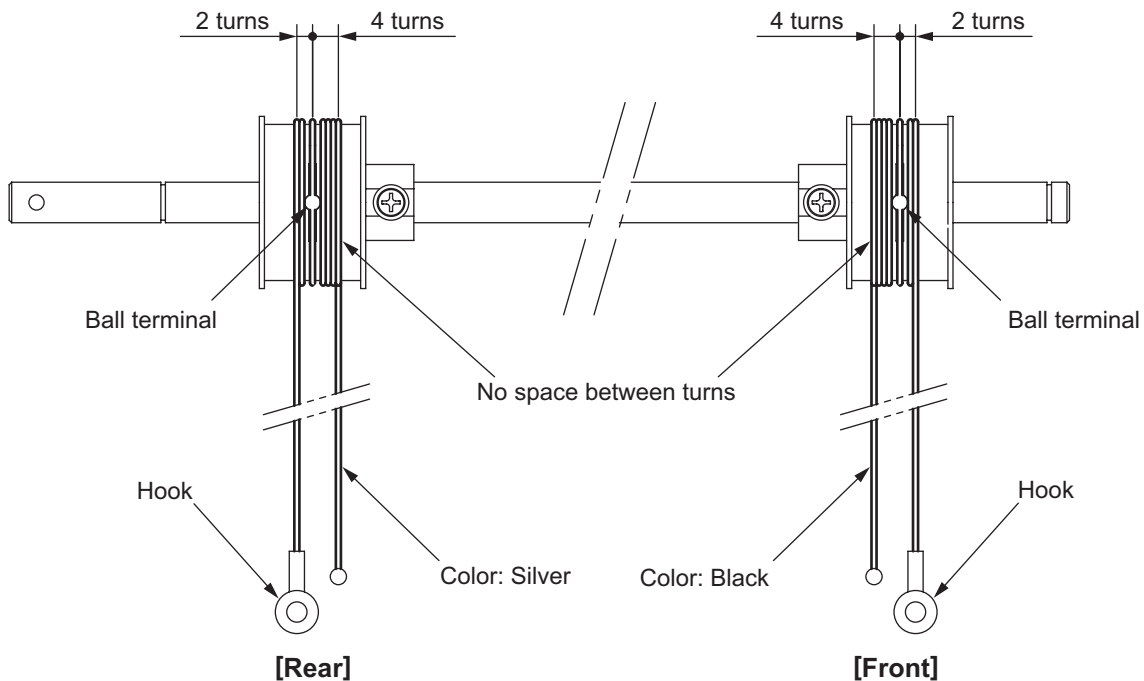


Fig.3-18

- After winding the wires around the pulleys, attach the wire holder jigs not to loosen the wires.

Notes:

1. When the wire holder jig is attached, make sure that the wire is not shifted or loosened.
2. The wire should come out of the slot of the wire holder jig and be passed under the arm of it.

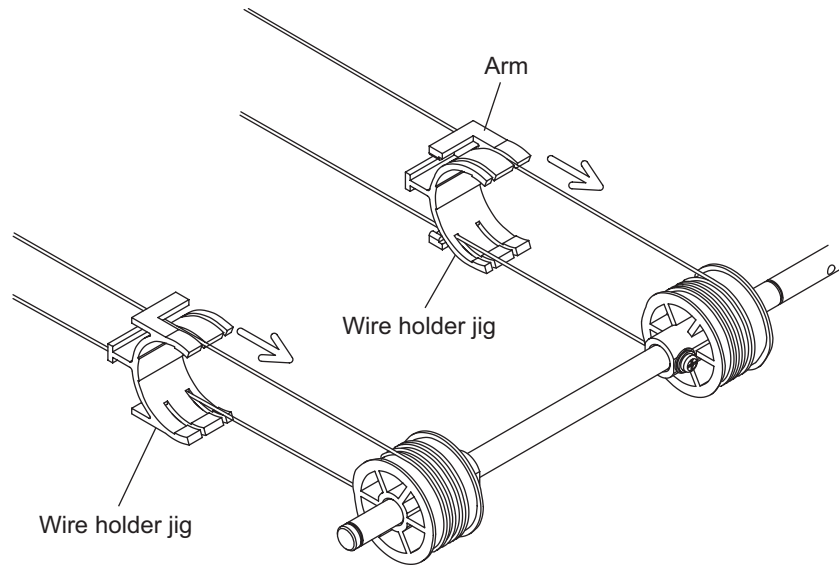


Fig.3-19

3.9.2 Lens unit

(1) Replacing the lens unit

- The lens unit must not be readjusted and some part of its components must not be replaced in the field since the unit is precisely adjusted. If any of the components is defective, replace the whole unit.
- When replacing the unit, do not loosen or remove the 6 screws indicated with the arrows.

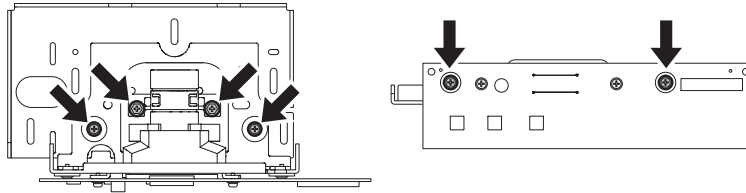


Fig.3-20

- Handle the unit with care. Do not hold the lens and adjusted part (hold the unit as shown below).

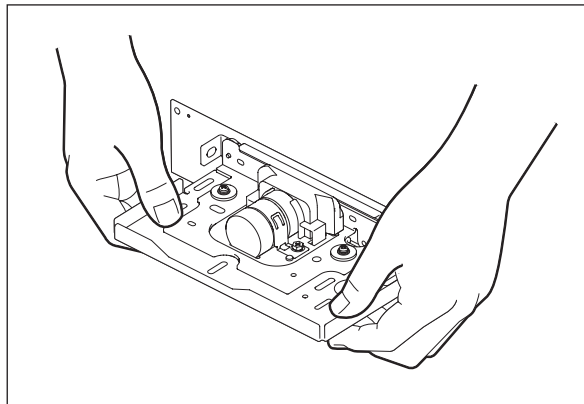


Fig.3-21

(2) Installation of lens unit

Follow the procedure below when installing and replacing the lens unit.

<Procedure>

- 1) Attach the lens unit and fix it temporarily with 2 screws.
- 2) Match the center scale of the plate in which the unit is to be installed and the rightmost scale of the adjusting hole on the lens unit plate.

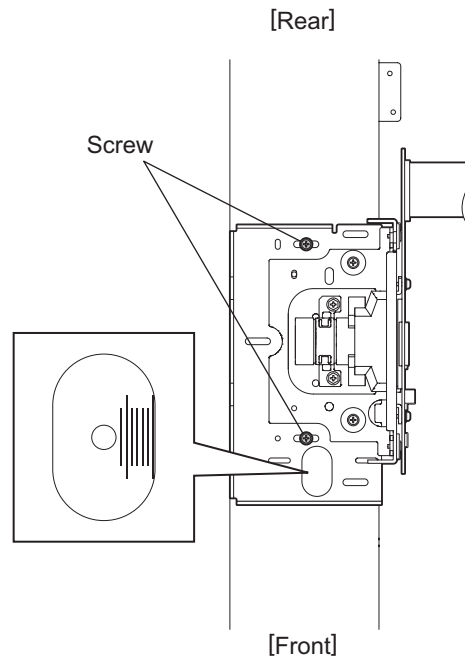


Fig.3-22

- 3) Tighten 5 screws securely to fix the lens unit while pushing it to the rear side and fix 2 ground wires with the screws.

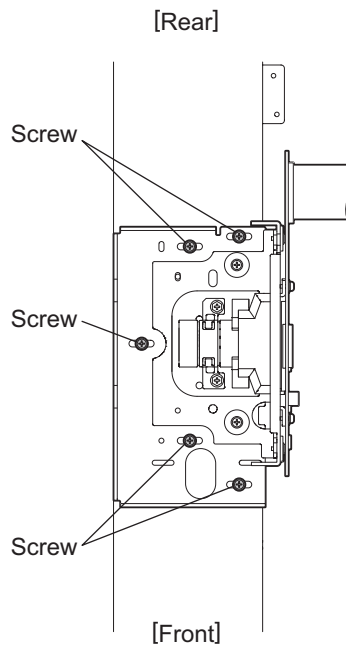


Fig.3-23

3.10 Adjustment of the Paper Feeding System

3.10.1 Sheet sideways deviation caused by paper feeding

<Procedure>

- The center of the printed image shifts to the front side. → Move the guide to the front side (Arrow (A) direction in the lower figure).

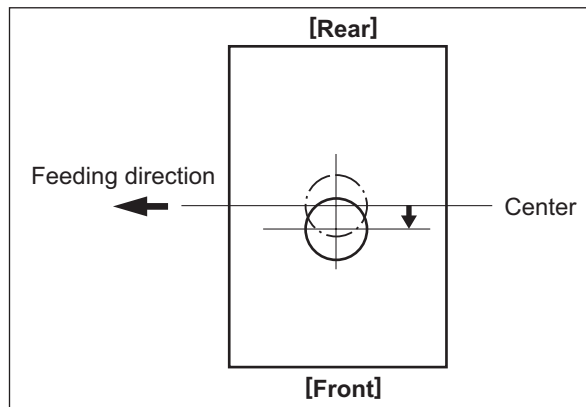


Fig.3-24

- The center of the printed image shifts to the rear side. → Move the guide to the rear side (Arrow (B) direction in the lower figure).

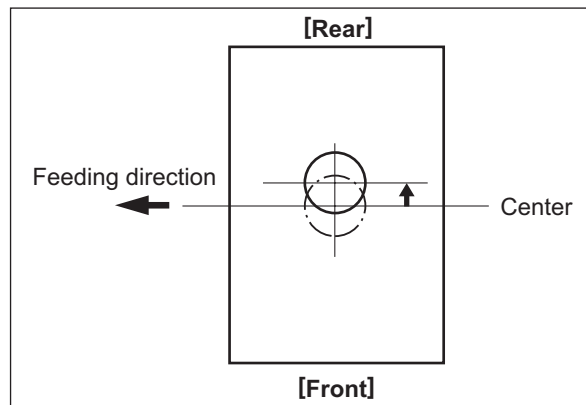


Fig.3-25

- Bypass feeding

- 1) Loosen the screw.
- 2) Move the entire guide to the front or rear side.
- 3) Tighten the screw.

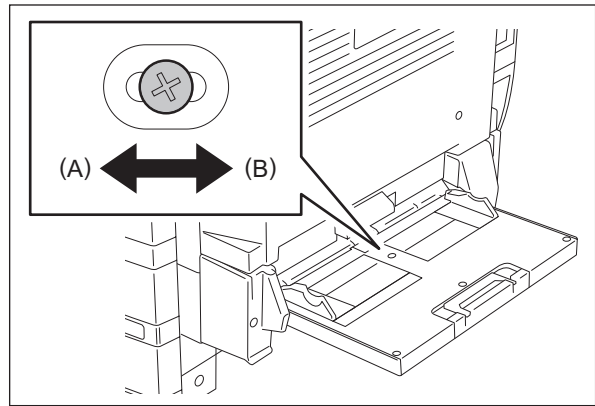


Fig.3-26

- Drawer feeding

- 1) Loosen 2 screws.
- 2) Move the entire guide to the front or rear side.
- 3) Tighten the screws.

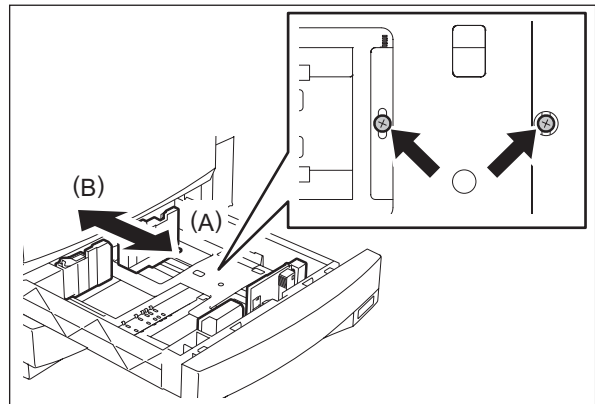


Fig.3-27

3.11 Adjustment of the Developer Unit

3.11.1 Doctor-to-sleeve gap (black developer unit)

Adjustment tool to use: Doctor-sleeve jig

Adjusting procedure:

- (1) Take off the black developer unit from the equipment.
- (2) Remove 2 screws and take off the developer material cover. Then discharge the developer material.

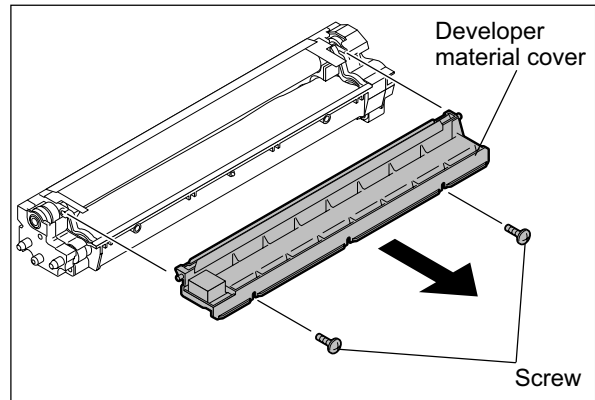


Fig.3-28

- (3) Remove 2 screws, release the hook and take off the doctor blade cover.

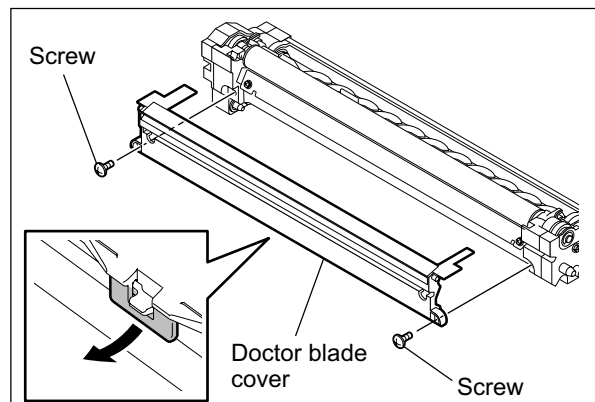


Fig.3-29

- (4) Loosen 2 doctor blade fixing screws. Insert the gauge "0.55" of the doctor sleeve jig between the developer sleeve and doctor blade to adjust the gap, and tighten the screws.

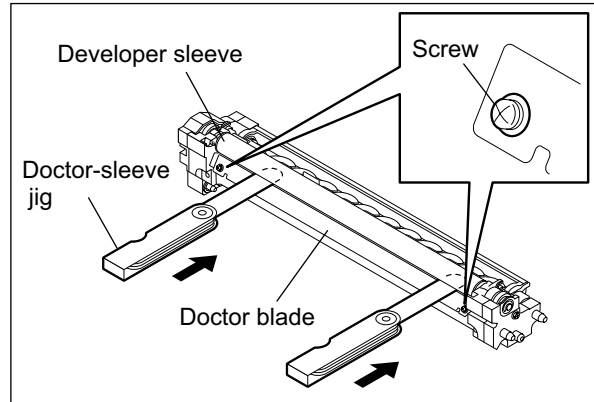


Fig.3-30

- (5) Insert the gauge "0.50" of the doctor-sleeve jig into the gap between the developer sleeve and doctor blade and make sure that the gauge can move smoothly in the front/rear direction. In addition, confirm that the gauge "0.60" cannot be inserted into the gap.

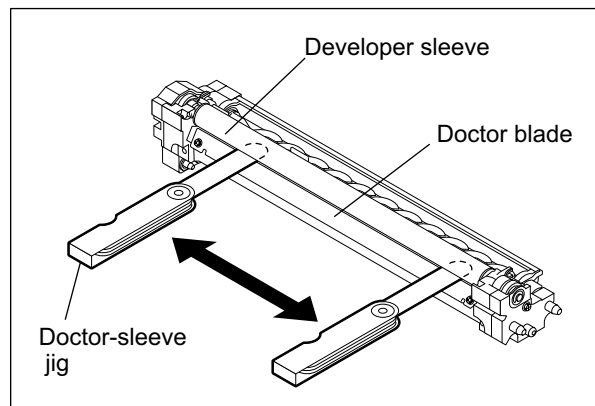


Fig.3-31

Notes:

1. When confirming and adjusting the gap between the developer sleeve and the doctor blade, insert the gauges into the gap after rotating the developer sleeve so that its marking faces the doctor blade.
2. While reattaching the black developer unit cover, set the latches securely.

3.11.2 Doctor-to-sleeve gap (color developer unit)

Adjustment tool to use : Doctor-sleeve jig

Adjusting procedure:

- (1) Take off the color developer unit from the equipment.
- (2) Remove 2 screws, release 5 hooks and take off the developer material cover. Then discharge the developer material.

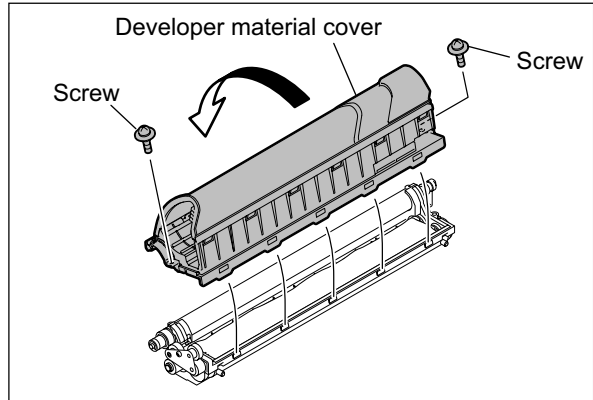


Fig.3-32

- (3) Remove 4 screws and the toner-scattering prevention seal holder.

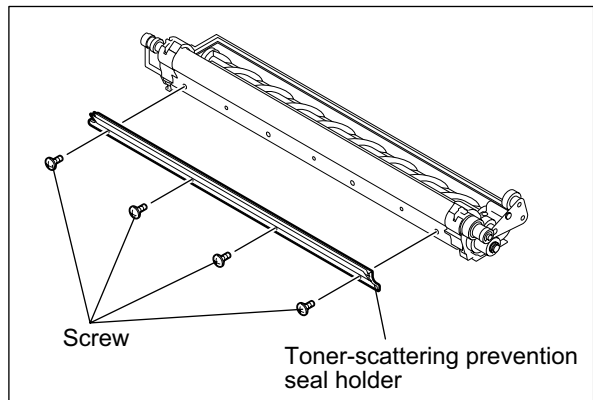


Fig.3-33

- (4) Loosen 2 doctor blade fixing screws. Insert the gauge "0.55" of the doctor-sleeve jig between the developer sleeve and doctor blade to adjust the gap, and tighten the screws.

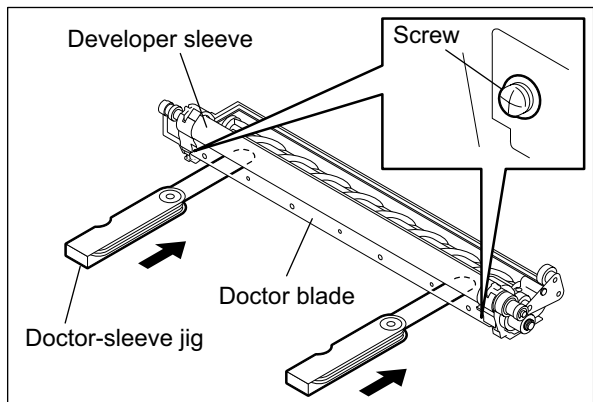


Fig.3-34

Notes:

1. Insert the gauge "0.50" of the doctor-sleeve jig into the gap between the developer sleeve and doctor blade and make sure that the gauge can move smoothly in the front/rear direction. In addition, confirm that the gauge "0.60" cannot be inserted into the gap.

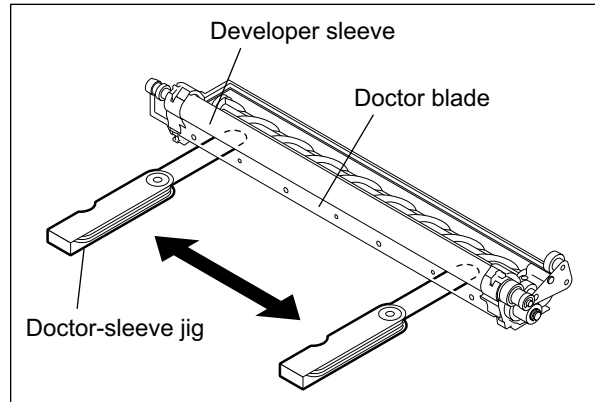


Fig.3-35

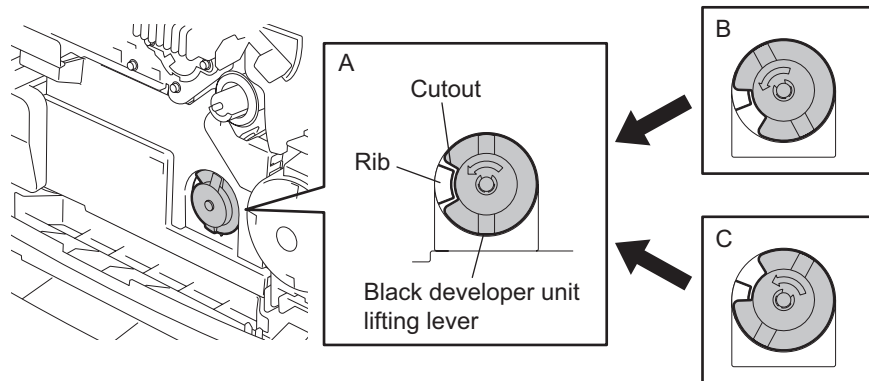
Notes:

1. When confirming and adjusting the gap between the developer sleeve and the doctor blade, insert the gauges into the gap after rotating the developer sleeve so that its marking faces the doctor blade.
2. While reattaching the color developer unit cover, set the latches securely.

3.11.3 Black developer unit lift up/down timing adjustment

Perform this adjustment only when the stop position of the black developer unit lift up/down lever deviates from the reference and a CEB0 error occurs.

The reference position means that the rib of the developer unit cover and the cutout of the black developer unit lift up/down lever are not overlapped as shown in Figure "A". (The cutout is in the 9 o'clock position.)



Adjustment procedure

- (1) Perform 03-460 Black developer unit lifting movement ON/OFF (continuous lifting movement) and check the stop position of the black developer unit lifting lever. At this time, check the deviation amount between the rib and the cutout of the lever.
- (2) The stop position is "B" (the cutout is lower than the reference position):
Make the value of the adjustment code (05-499) smaller so that the stop position is closer to the reference. Making the value smaller by 1 turns the lever circumference by approx. 3 mm.

Note:

If the adjustment cannot be performed though 0 is input, the clutch may have failed. Examine the clutch.

- (3) The stop position is "C" (the cutout is upper than the reference position):
Make the value of the adjustment code (05-499) larger so that the stop position is closer to the reference. Making the value larger by 1 turns the lever circumference by approx. 3 mm.

Note:

If the adjustment cannot be performed though 8 is input, the clutch may have failed. Examine the clutch.

Note:

If an error occurs even though this adjustment is performed, other causes may be considered. Examine and check the defect according to the methods in troubleshooting.

Code to be used for the adjustment

| Adjustment mode (05) | | | | | | | |
|----------------------|----------------|---|----------|----------------------------------|-----|---|-----------|
| Code | Classification | Items | Function | Default <Acceptable value> | RAM | Contents | Procedure |
| 499 | Development | Black developer unit lift up/down timing adjustment | ALL | 4 <0-255> | M | Changes the lift up/down timing of the black developer unit when a CEB0 error occurs. | 1 |

Note:

Do not input more than 8 for acceptable value. (If a number from 9 to 255 is input, it is processed as 8.)

Relation between adjustment value and changing amount

| Adjustment value | Changing amount for default value (Turning degree of black developer unit lift up/down lever) |
|------------------|--|
| 0 | Turning 32 degrees CW (approx. 12 mm in the lever circumference) |
| 1 | Turning 24 degrees CW (approx. 9 mm in the lever circumference) |
| 2 | Turning 16 degrees CW (approx. 6 mm in the lever circumference) |
| 3 | Turning 8 degrees CW (approx. 3 mm in the lever circumference) |
| 4 | Default value |
| 5 | Turning 8 degrees CCW (approx. 3 mm in the lever circumference) |
| 6 | Turning 16 degrees CCW (approx. 6 mm in the lever circumference) |
| 7 | Turning 24 degrees CCW (approx. 9 mm in the lever circumference) |
| 8 | Turning 32 degrees CCW (approx. 12 mm in the lever circumference) |

* CW: Clockwise
CCW: Counter Clockwise

3.12 Adjustment of the RADF (MR-3018)

3.12.1 Adjustment of RADF Position

Perform this adjustment when the RADF is not installed in the correct position.

Note:

Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF.

[A] Checking

- (1) Open the RADF and install 2 positioning pins (the positioning pins are installed to the back side of the hinge which is on the left side of the RADF).

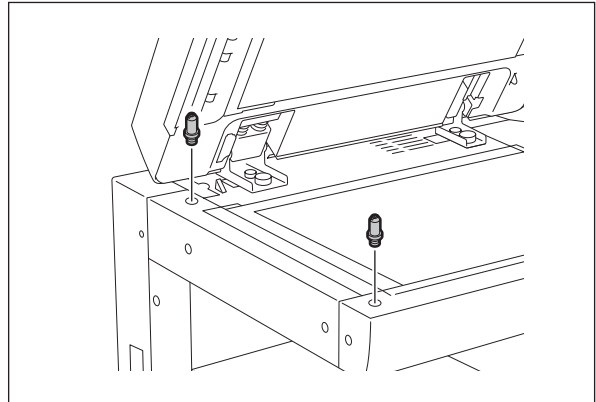


Fig.3-36

- (2) Remove the platen sheet.

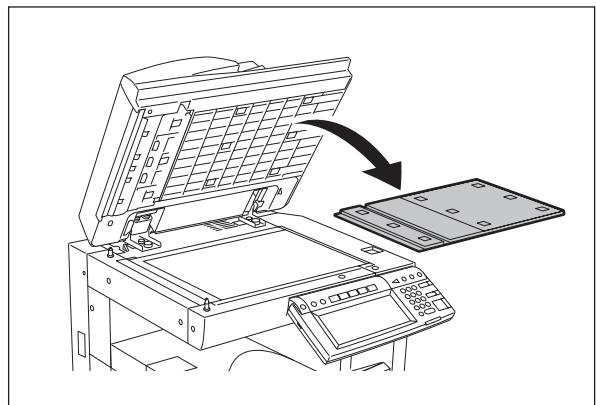


Fig.3-37

- (3) Close the RADF and check if the positioning pins fit the holes on the RADF.

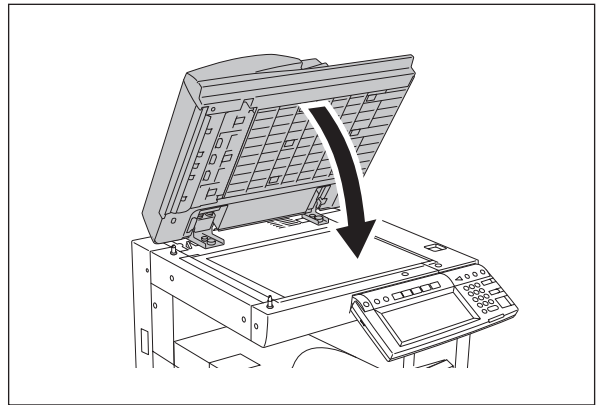


Fig.3-38

[B] Adjustment

If the pins cannot be fitted into the holes, perform the adjustment according to the following procedure.

- (1) Remove the right-hand hinge screw at the rear side.

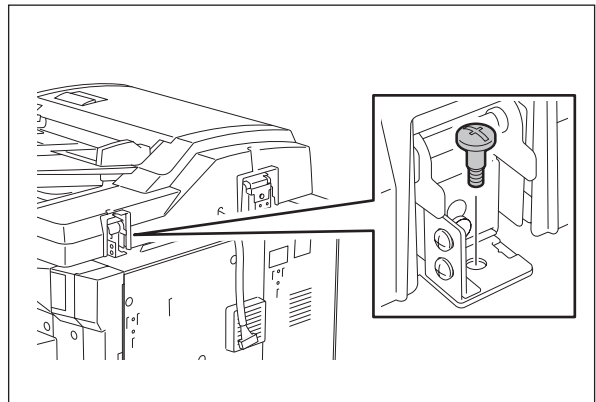


Fig.3-39

- (2) Loosen the left-hand hinge screw at the rear side.

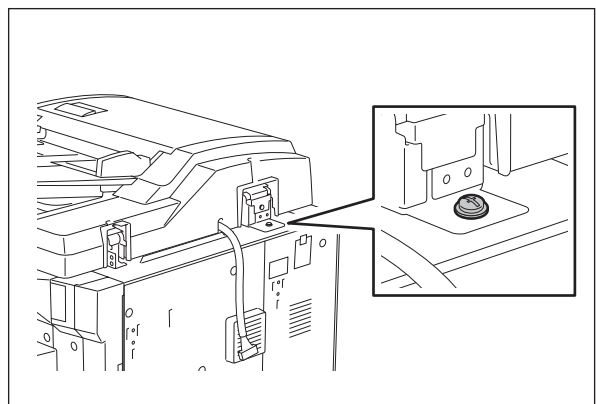


Fig.3-40

- (3) Loosen the hinge screws at the front side.

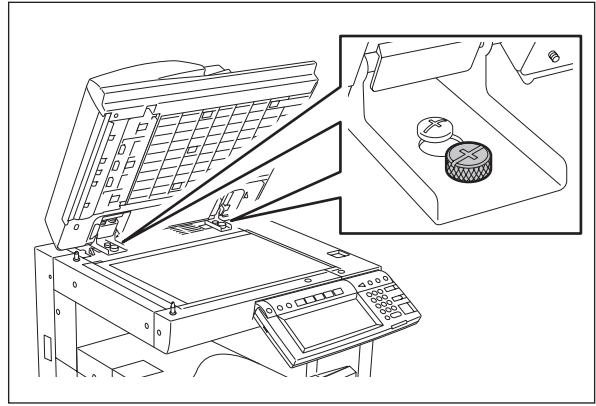


Fig.3-41

- (4) Position the pins with the holes on the RADF by moving it so that the pins fit into the holes when the RADF is closed.

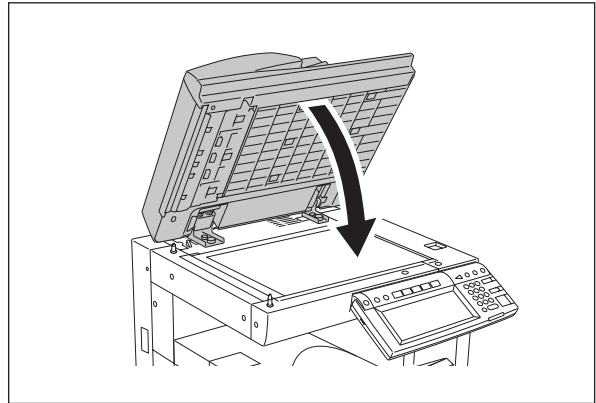


Fig.3-42

- (5) Tighten the left-hand hinge screw at the rear side.

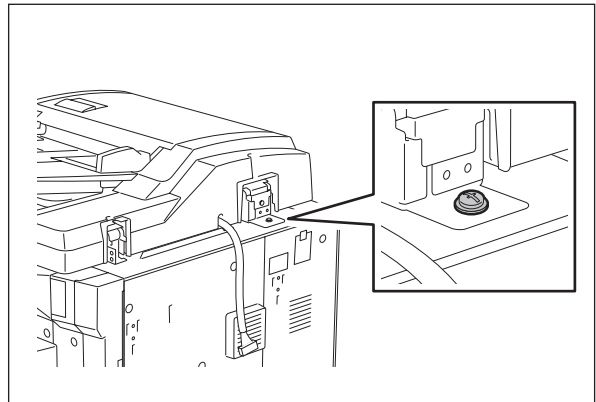


Fig.3-43

- (6) Loosen the hole position adjustment screws on the right hand side.

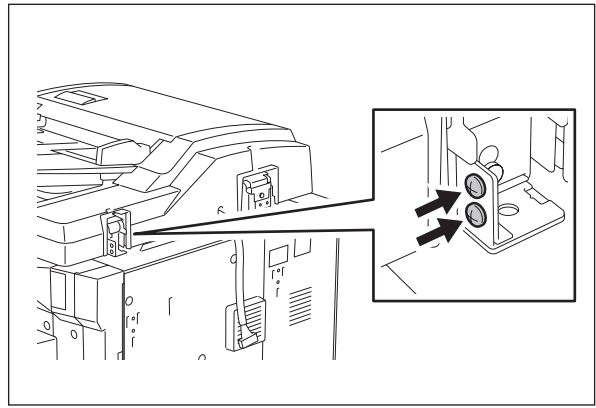


Fig.3-44

- (7) Match the screw hole positions.

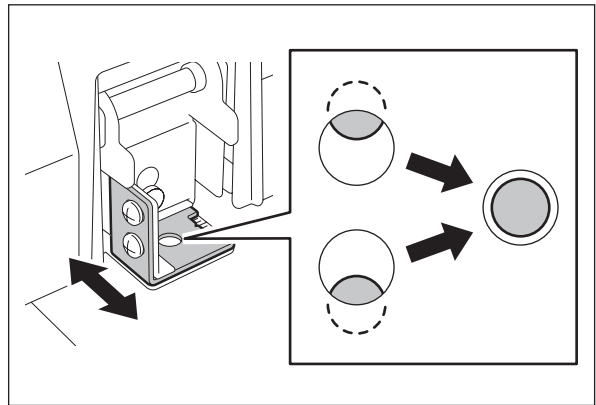


Fig.3-45

- (8) Install the right-hand hinge screw at the rear side.

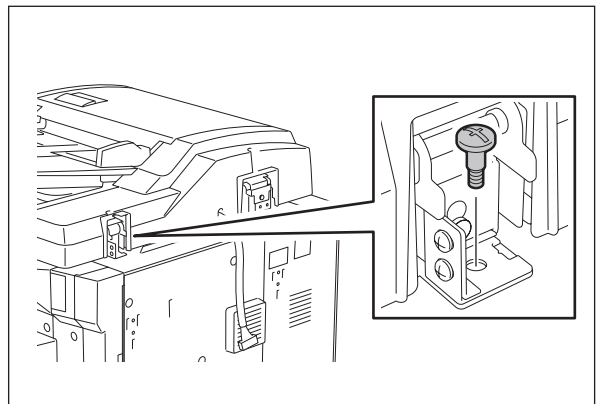


Fig.3-46

- (9) Loosen the hinge screws at the front side.

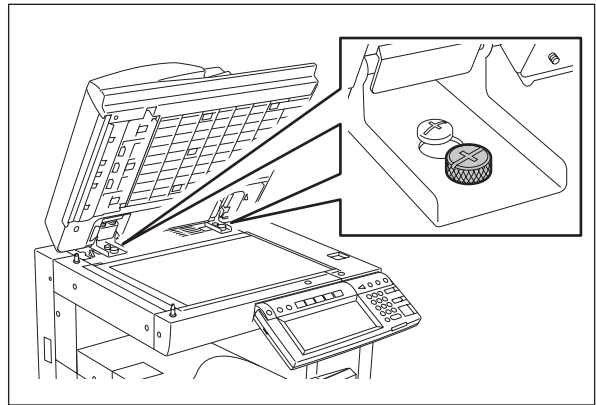


Fig.3-47

- (10) Place the platen sheet on the original glass and align it to the top left corner.
Close the RADF gently and open it to check if the platen sheet is attached properly.

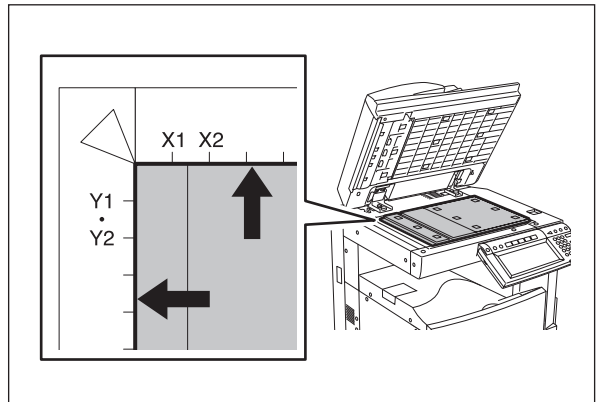


Fig.3-48

3.12.2 Adjustment of RADF Height

Note:

Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF.

[A] Checking

- (1) Close the RADF.
- (2) Light the exposure lamp.
 - Turn the power ON while pressing [0] and [3] simultaneously.
 - Key in [267] and then press the [START] button. The exposure lamp is turned ON for a given length of time.
- (3) Visually check the gap between platen guide holder "A" and upper surface of the original glass "B" from the left hand side of the equipment. If the value is not within the tolerance, perform the adjustment according to the following procedure.

[Tolerance of the gap]

Rear side: 0 - 0.5 mm

Front side: 0 mm

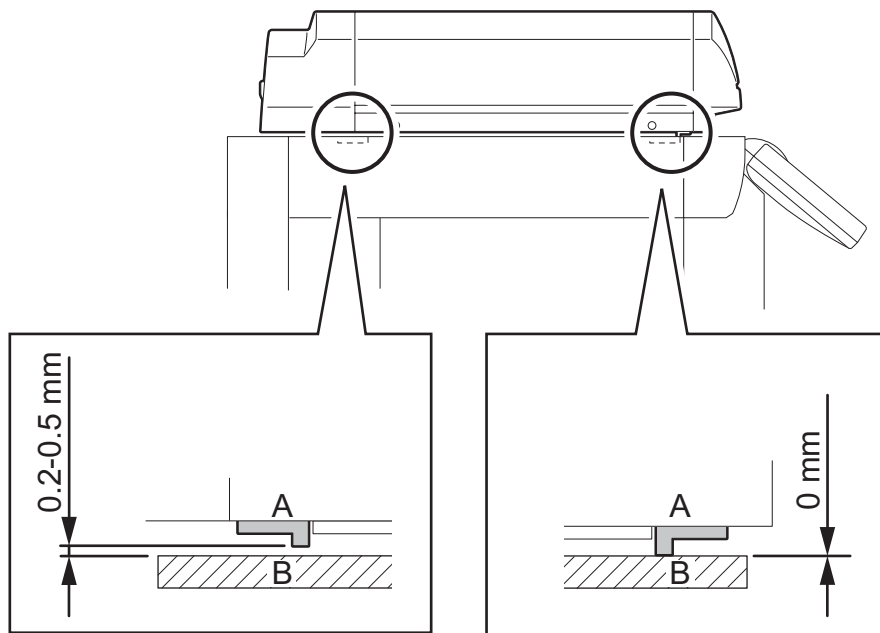


Fig.3-49

[B] Adjustment

- (1) Close the RADF.

- (2) Adjust it by turning the adjustment screws on the hinges.
- Adjust the height on the rear side by means of the screw on the hinge on the feed side of the RADF.
- Turn it clockwise Heightened
 Turn it counterclockwise Lowered

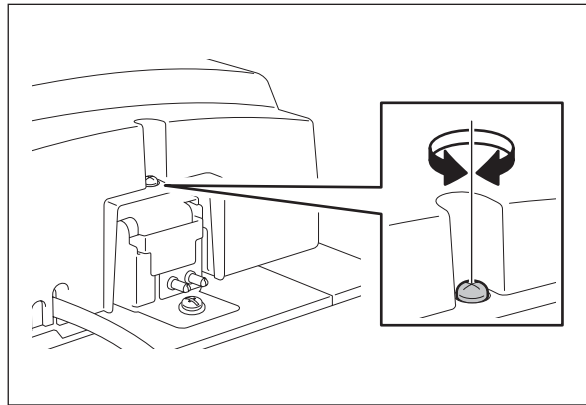


Fig.3-50

- Adjust the gap on the rear side by means of the screw on the hinge on the feed side of the RADF.
- Turn it clockwis Lowered
 Turn it counterclockwise Heightened

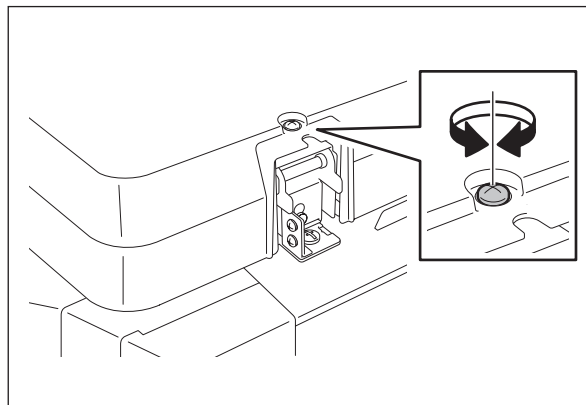


Fig.3-51

3.12.3 Adjustment of Skew

Note:

Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF. Also, the RADF position and height shall be adjusted properly.

[A] Checking

Check the image using the chart (original) with vertical and horizontal lines in the following procedure.

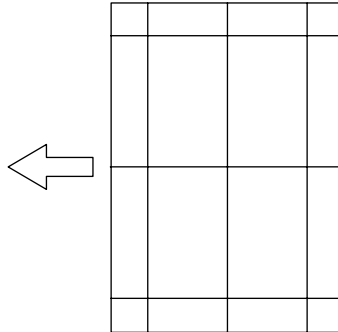


Fig.3-52 Chart (Original)

Simplex copying:

- (1) Place the chart provided as an original with its face up on the original tray of the RADF, select [1 Sided -> 1 Sided] and press the [START] button.
- (2) Superimpose the chart on the copy and check the inclination of the copy image.

Duplex copying:

- (1) Place the chart provided as an original with its face up on the original tray of the RADF, select [2 Sided -> 2 Sided] and press the [START] button.
- (2) Superimpose the chart on the copy and check the inclination of the copy image.

[B] Adjustment
Simplex copying:

- (1) Shift the aligning plate with the scale as the guide shown in the figure below to adjust the skew.

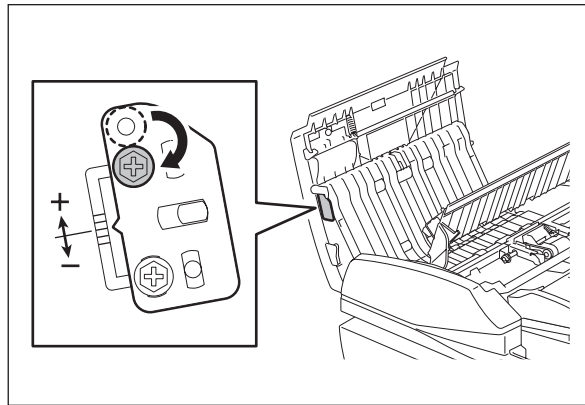


Fig.3-53

- (2) If the image skew is "C" as shown in the figure below, shift the aligning plate in the direction of "+", and if "D", shift it to "-".

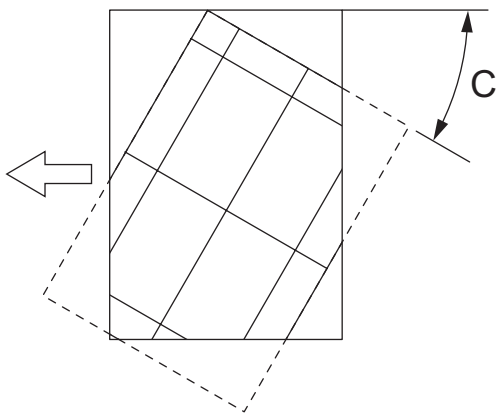


Fig.3-54

Shift the aligning plate in the direction of "+".

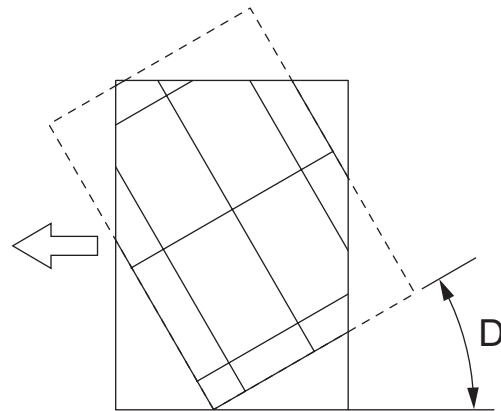


Fig.3-55

Shift the aligning plate in the direction of "-".

Duplex copying:

- (1) Shift the aligning plate with the scale as the guide shown in the figure below to adjust the skew.

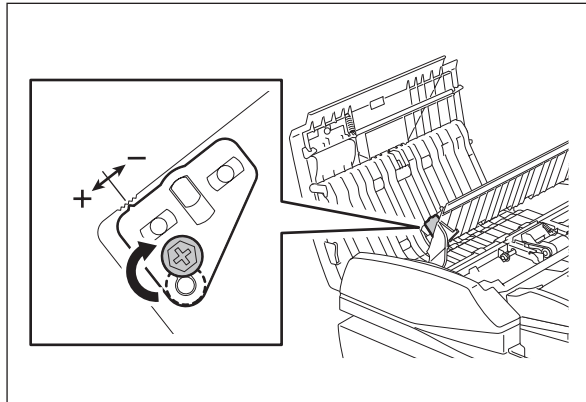


Fig.3-56

- (2) If the image skew is "C" as shown in the figure below, shift the aligning plate in the direction of "-", and if "D", shift it to "+".

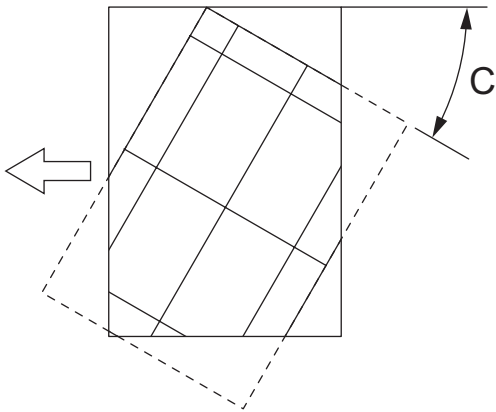


Fig.3-57

Shift the aligning plate in the direction of "-".

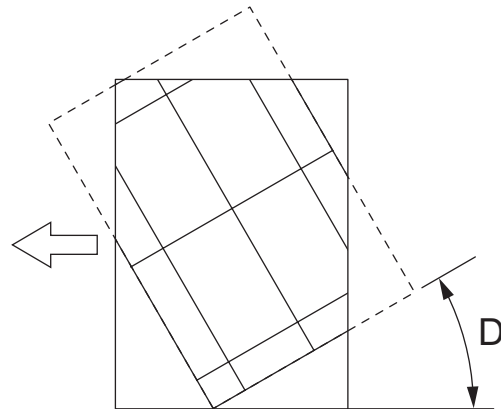


Fig.3-58

Shift the aligning plate in the direction of "+".

3.12.4 Adjustment of the Leading Edge Position

Note:

Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF. Also, the RADF position and height shall be adjusted properly.

[A] Checking

Check the image using the chart (original) with vertical and horizontal lines in the following procedure.

Simplex copying:

- (1) Place the chart provided as an original with its face up on the original tray of the RADF, select [1 Sided -> 1 Sided] and press the [START] button.
- (2) Superimpose the chart on the copy and check the leading edge E of the chart and F of the copy.

Duplex copying:

- (1) Place the chart provided as an original with its face up on the original tray of the RADF, select [2 Sided -> 2 Sided] and press the [START] button.
- (2) Superimpose the chart on the copy and check the leading edge E of the chart and F of the copy.

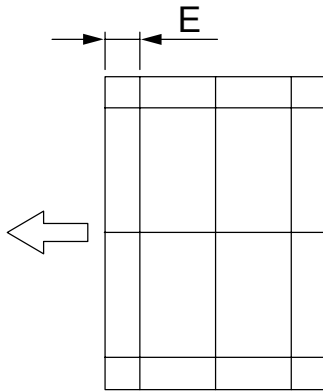


Fig.3-59 Chart (Original)

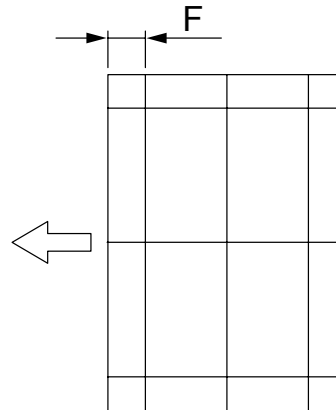


Fig.3-60 Copy

[B] Adjustment

Simplex copying:

- (1) Turn the power ON while pressing [0] and [5] simultaneously, key in [365] and then press the [START] button.
- (2) Enter the value.
 - If the leading edge (F) margin of the copy image is larger than the (E) margin of the chart, enter a value smaller than the current one.

Note:

Changing one value shifts the copy image by 0.1 mm.

- If the leading edge (F) margin of the copy image is smaller than the (E) margin of the chart, enter a value larger than the current one.

Note:

Changing one value shifts the copy image by 0.1 mm.

- (3) Press the [ENTER] button.

Duplex copying:

- (1) Turn the power ON while pressing [0] and [5] simultaneously, key in [366] and then press the [START] button.
- (2) Enter the value.
 - If the leading edge (F) margin of the copy image is larger than the (E) margin of the chart, enter a value smaller than the current one.

Note:

Changing one value shifts the copy image by 0.1 mm.

- If the leading edge (F) margin of the copy image is smaller than the (E) margin of the chart, enter a value larger than the current one.

Note:

Changing one value shifts the copy image by 0.1 mm.

- (3) Press the [ENTER] button.

3.12.5 Adjustment of Horizontal Position

Note:

Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF. Also, the RADF position and height shall be adjusted properly.

[A] Checking

Check the image using the chart (original) with a center line in the following procedure.

- (1) Place the chart provided as an original with its face up on the original tray of the RADF.
- (2) Press the [START] button.
- (3) Fold the copy in half and check if the center line is misaligned.

[B] Adjustment

- (1) Turn the power ON while pressing [0] and [5] simultaneously.
- (2) Key in [358] and then press the [START] button.
 - If the center line of the copy image is shifted to the front side of the equipment, enter a value larger than the current one.

Note:

Changing one value shifts the copy image by 0.042 mm.

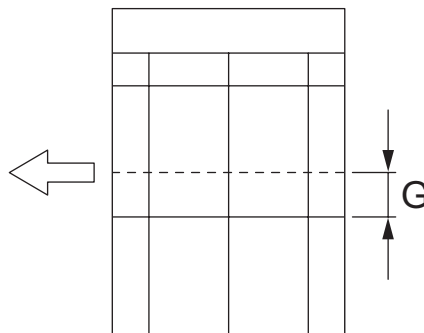


Fig.3-61

- If the center line of the copy image is shifted to the rear side of the equipment, enter a value smaller than the current one.

Note:

Changing one value shifts the copy image by 0.042 mm.

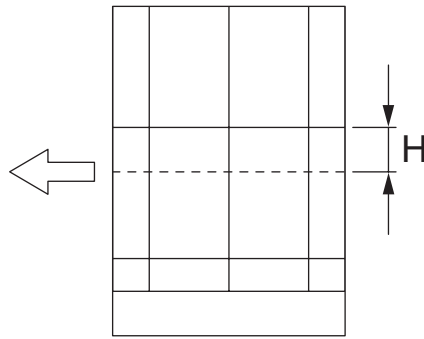


Fig.3-62

(3) Press the [ENTER] button.

3.12.6 Adjustment of Copy Ratio

Note:

Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF. Also, the RADF position and height shall be adjusted properly.

[A] Checking

Check the image using the chart (original) with vertical and horizontal lines in the following procedure.

- (1) Place the chart provided as an original with its face up on the original tray of the RADF.
- (2) Press the [START] button.
- (3) Superimpose the chart on the copy and check the image dimension "l".

[B] Adjustment

- (1) Turn the power ON while pressing [0] and [5] simultaneously.
- (2) Key in [357] and then press the [START] button.
 - If the copy image dimension "l" is larger than the chart dimension, enter a value smaller than the current one.
 - If the copy image dimension "l" is smaller than the chart dimension, enter a value larger than the current one.

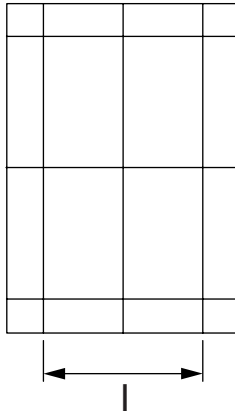


Fig.3-63

- (3) Press the [ENTER] button.

3.12.7 Adjustment of RADF Opening/Closing Sensor

Adjust the bracket position so that the sensor is turned ON when the height "A" becomes 100 mm or less (within the empty weight falling limit).

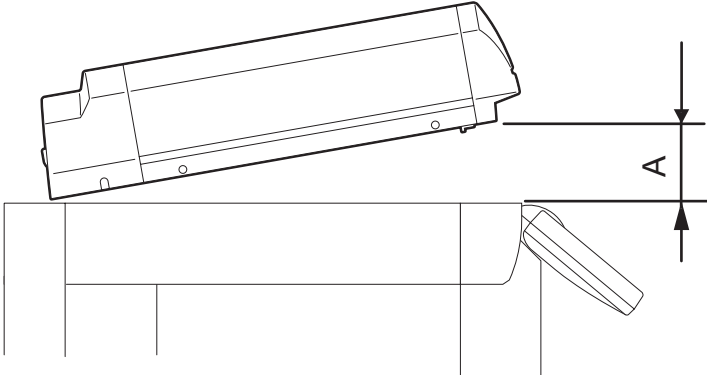


Fig.3-64

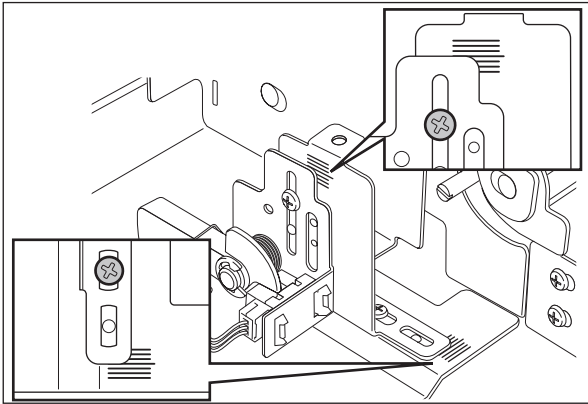


Fig.3-65

3.13 Adjustment of the Finisher (MJ-1022)

3.13.1 Adjusting the jogging plate width

- (1) Remove the right inner cover and the rear cover.
- (2) Adjust the front jogging plate to the home position.

- Set SW1 on the finisher controller PC board as shown in Fig. 3-1301.
- Press SW2 twice on the finisher controller PC board.
 - The front jogging plate moves to the home position.

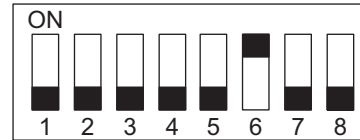


Fig.3-66

- (3) Adjust the rear jogging plate to the home position.

- Set SW1 on the finisher controller PC board as shown in Fig. 3-1302.

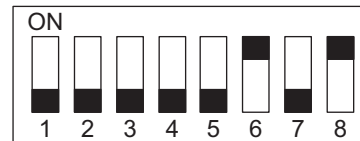


Fig.3-67

- Press SW2 twice on the finisher controller PC board.
 - The rear jogging plate moves to the home position.

Rear jogging plate home position

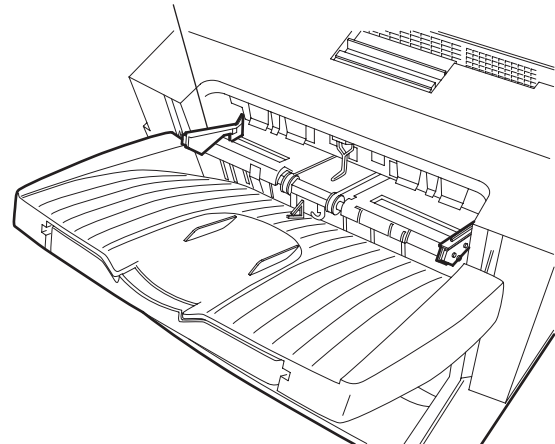


Fig.3-68

- (4) Measure the jogging width (standard at 317 mm).

- (5) Remove the processing tray.
- (6) Loosen the screw on the home position sensor plate at the front.

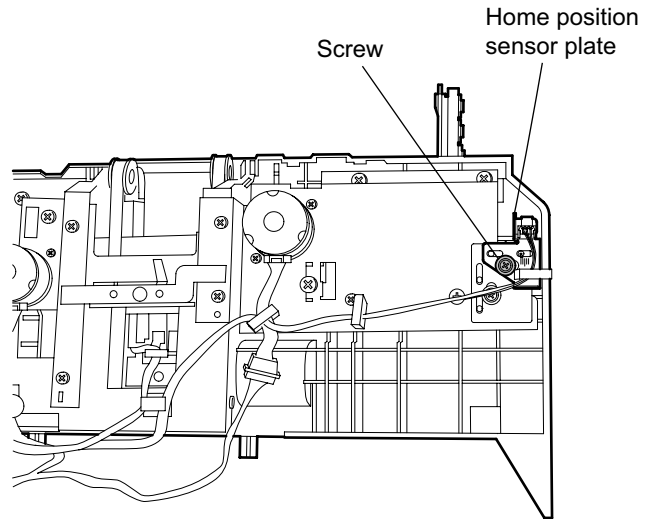


Fig.3-69

- (7) Adjust the position of the front jogging plate home position sensor (S6) with reference to the index.

EX. 1

If the width is 319 mm in step (2), the difference from the standard is +2 mm, it requires relocation of the sensor [3] in the direction of arrow A by 2 mm.

EX. 2

If the width is 316 mm in step (2), the difference from the standard is -1 mm; it requires relocation of the sensor [3] in the direction of arrow B by 1 mm.

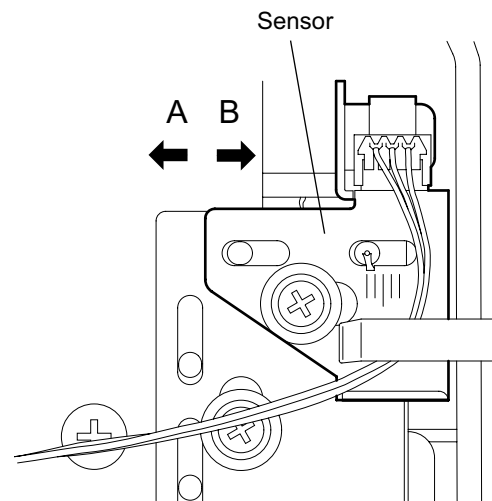


Fig.3-70

3.13.2 Adjusting the angle of the jogging plate

- (1) Without removing the processing tray unit, loosen the 2 mounting screws of the rear jogging plate.

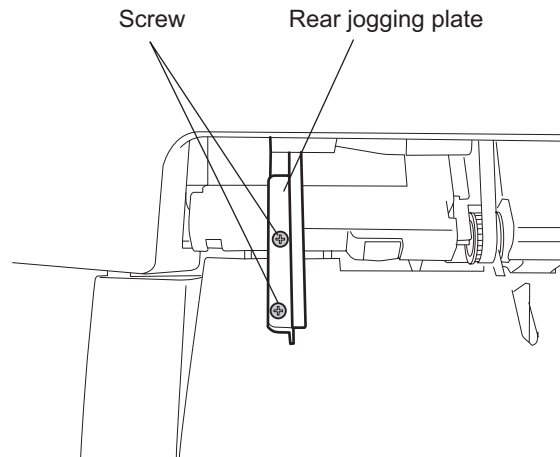


Fig.3-71

- (2) Place several sheets of A4/LT paper on the processing tray, and adjust the rear jogging plate. (At this time, adjust the gap between the paper and the front end of the rear jogging plate so that it is 0 mm to 0.5 mm.)

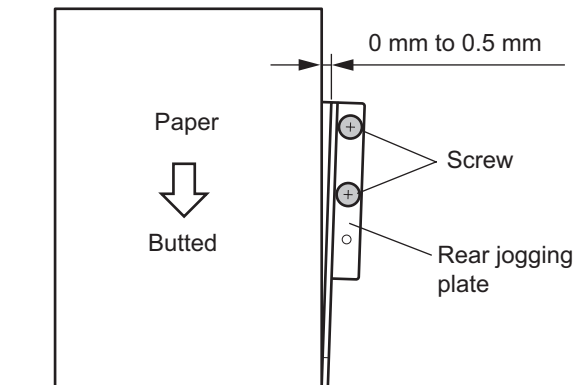


Fig.3-72

- (3) With reference to the rear jogging plate adjusted in step (2), adjust the front jogging plate in the same manner.

3.13.3 Adjusting the overlap of the sensor flag

If the overlap between the sensor and the flag is wrong for some reason, perform the following adjustment.

- (1) Remove the processing tray unit.
- (2) Loosen the mounting screw of the front/rear jogging plate adjusting plate; then, move the adjusting plate to the left and the right.

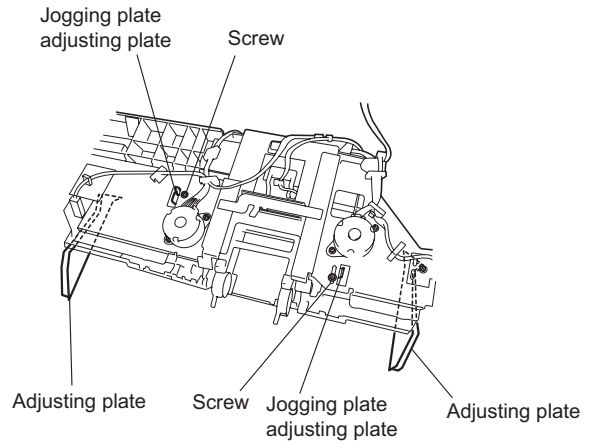


Fig.3-73

- (3) Tighten the screw so that the overlap between the flag of the front/rear jogging rack plate and the sensor is 1.5 mm to 2.0 mm.

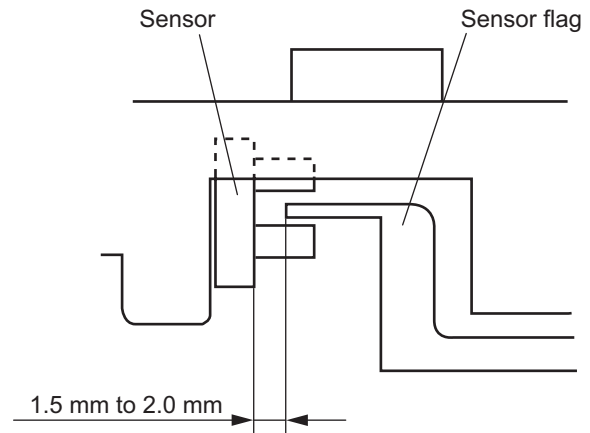


Fig.3-74

3.13.4 Adjusting the tension of the stack processing motor belt

- (1) Remove the right inner cover and the rear cover.
- (2) Remove the 2 mounting screws, and detach the grip unit.

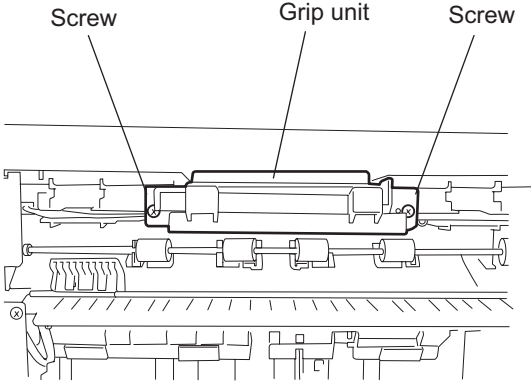


Fig.3-75

- (3) Loosen the screw on the tension arm plate. (The tension arm plate will be pulled under tension by the tension spring.)

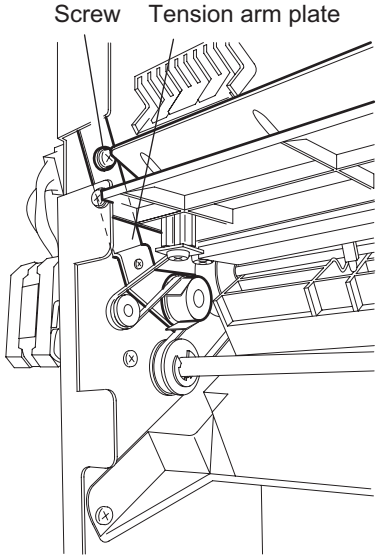


Fig.3-76

- (4) Move the returning roller shaft to its lower limit (the slack of a belt is lightly taken); then, tighten the screw on the tension arm plate.

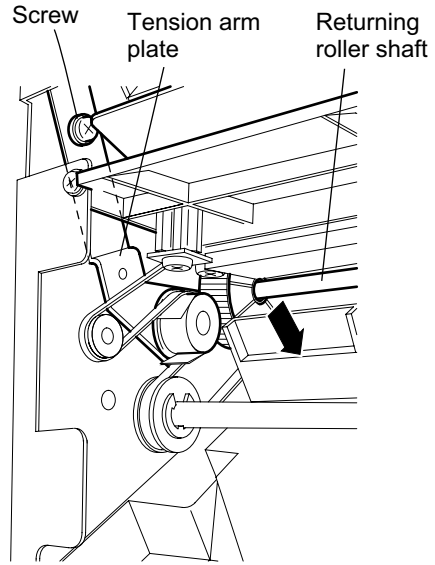


Fig.3-77

- (5) Check to make sure that the returning roller shaft moves smoothly.

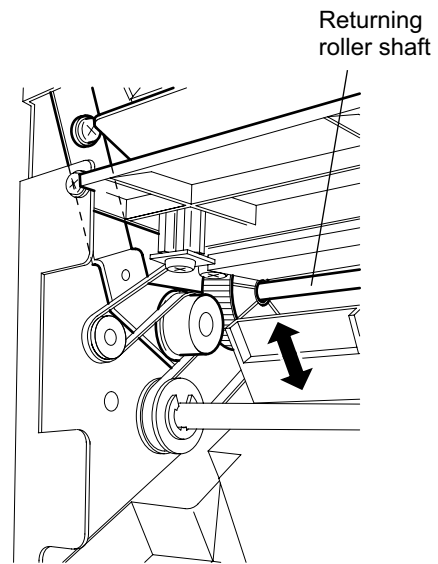


Fig.3-78

3.13.5 Releasing the stack tray guide lever fixing plate

- (1) Remove the right inner cover and the rear cover.
- (2) Remove the finisher control PC board, PC board bracket and sensor PC board.
- (3) Remove the stack tray.
- (4) Remove the stack tray drive unit.
- (5) Place the stack tray guide lever fixing plate so that it is in view through the hole in the side plate (front, rear). Then remove the fixing screw. (Perform the same for the front and the rear.)

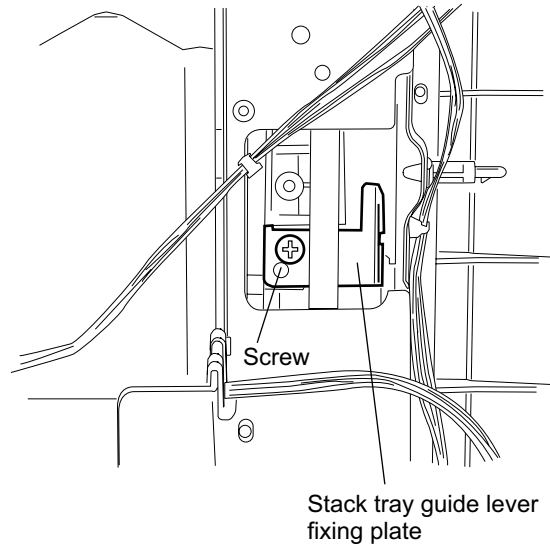


Fig.3-79

Note:

When removing the mounting screw, be sure to hold the stack tray guide lever up from below.

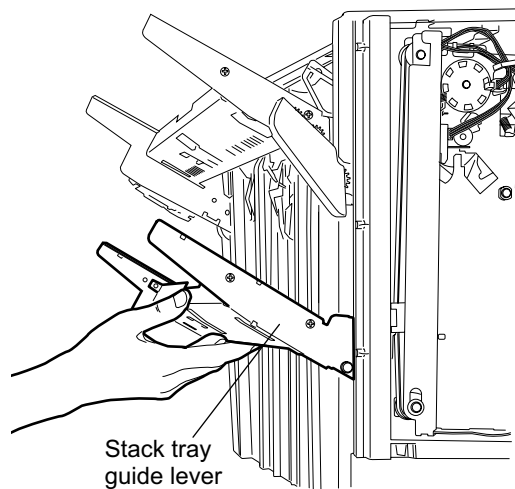


Fig.3-80

3.13.6 Adjustment of the upper tray angle

- (1) Remove the front cover.

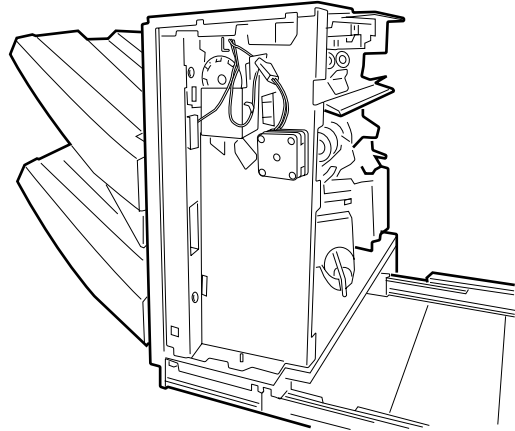


Fig.3-81

- (2) Loosen the screw denoted with the arrow.

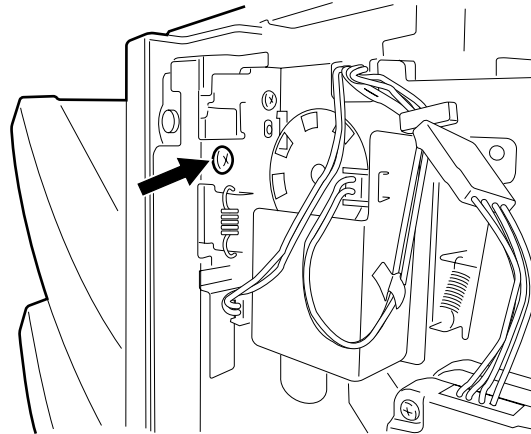


Fig.3-82

- (3) The tension becomes loose.
While pushing the bracket down, hold the tray and move it up or down, to adjust the angle so that the tray becomes parallel by a visual check.

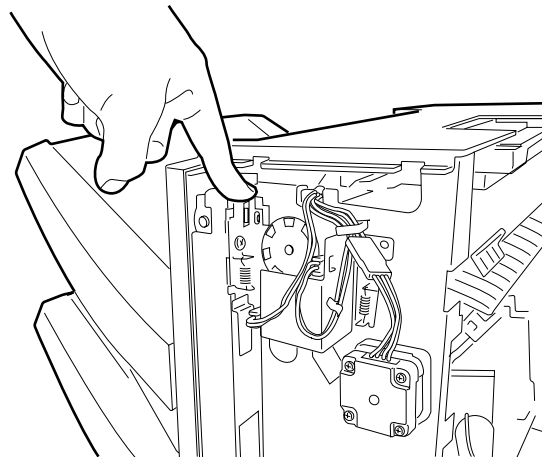


Fig.3-83

- (4) After the height adjustment, tighten the fixing screw of the bracket.

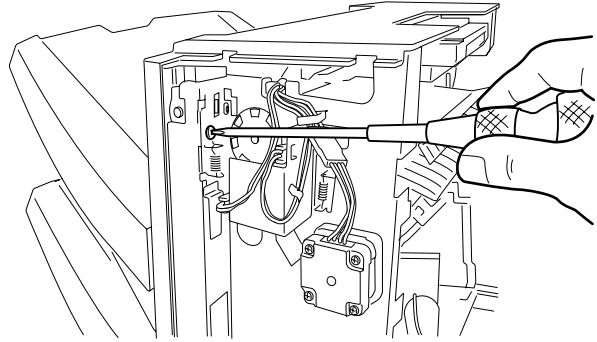


Fig.3-84

Note:


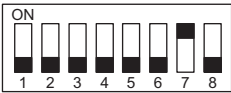
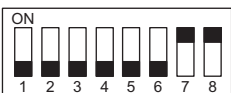
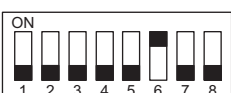
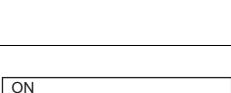
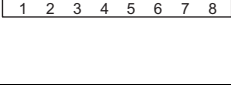


If the fixing screw of the bracket is not fixed, the belt is loosened which may cause a skipped tooth.

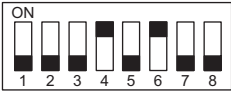


3.13.7 DIP switch functions

You can simulate various functions by setting the DIP switch (SW1) on the finisher controller PC board appropriately.

Initiating Operations

- 1) Remove any obstacles from the area of operation.
- 2) Set the DIP switch (SW1) as shown, and turn ON the power (so that LED1 will start to blink).
- 3) Press the pushing switch (SW2) twice to initiate the operation in question. (LED2 will remain on during operation).

| Setting | Item | Operation | | To stop |
|---|---|--|--|---|
|  | Delivery motor | The delivery roller rotates in a specific speed. | | <ul style="list-style-type: none"> Press SW2 again. Turn OFF the joint sensor (S4). |
|  | Stack processing motor (stack delivery lever) | The stack delivery lever moves to its home position and stops. | | <ul style="list-style-type: none"> Turn OFF the joint sensor (S4). |
|  | Stack processing motor (returning roller) | The returning roller moves to the home position and stops. | | <ul style="list-style-type: none"> Turn OFF the joint sensor (S4). |
|  | Front jogging plate motor | When not at the home position | The front jogging plate moves to its home position and stops. | <ul style="list-style-type: none"> Turn OFF the joint sensor (S4). |
| | | When at the home position | The front jogging plate moves over a specific position and stops at the home position. | <ul style="list-style-type: none"> Turn OFF the joint sensor (S4). |
|  | Rear jogging plate motor | When not at the home position | The rear jogging plate moves to the home position and stops. | <ul style="list-style-type: none"> Turn OFF the joint sensor (S4). |
| | | When at the home position | The rear jogging plate moves over a specific distance and stops. | <ul style="list-style-type: none"> Turn OFF the joint sensor (S4). |
|  | Upper stack tray motor (up) | The upper stack tray moves up and stops when the upper stack tray upper limit sensor turns ON. | | <ul style="list-style-type: none"> Press SW2 again. Turn OFF the joint sensor (S4). |
|  | Upper stack tray motor (down) | The upper stack tray moves down and stops when the lower stack tray lower limit sensor turns ON. | | <ul style="list-style-type: none"> Press SW2 again. Turn OFF the joint sensor (S4). |
|  | Lower stack tray motor (up) | The lower stack tray moves up and stops when the lower stack tray upper limit sensor is turned ON. | | <ul style="list-style-type: none"> Press SW2 again. Turn OFF the joint sensor (S4). |

| Setting | Item | Operation | To stop |
|---|-------------------------------|--|---|
|  | Lower stack tray motor (down) | The lower stack tray moves down and stops when the lower stack tray lower limit sensor is turned ON. | <ul style="list-style-type: none"> • Press SW2 again. • Turn OFF the joint sensor (S4). |
|  | Stapler motor | The stapler motor stops after the stapling operation. | <ul style="list-style-type: none"> • Press the stapler safety switch (S14). • Turn OFF the joint sensor (S4). |
|  | Shipping position operation | The upper and lower stack trays move to the shipping position and stop. | <ul style="list-style-type: none"> • Turn OFF the joint sensor (S4). |

Note:

Perform the shipping position operation when the finisher is packed again.

3.14 Adjustment of the Finisher (MJ-1023/1024)

3.14.1 Adjusting the alignment position (Finisher unit)

Perform this adjustment after replacing the finisher controller PC board or when the alignment position must be changed for some reason.

- (1) Remove the rear cover of the finisher unit.
- (2) Check that the power is OFF and set SW104 on the finisher controller PC board as follows according to the paper used for adjustment.

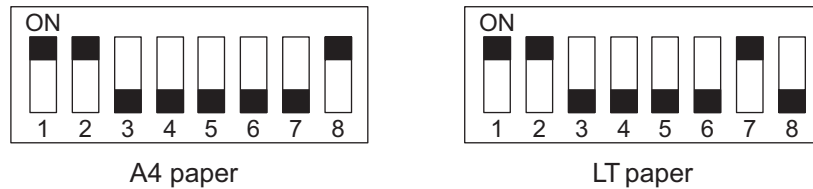


Fig.3-85

- (3) Turn ON the power.
- (4) Press SW103 on the finisher controller PC board.
 - When SW103 is pressed, the swing guide opens and the alignment plate moves to prescribed position.
- (5) Place ten sheets of A4/LT paper between the alignment plates and push them against the stopper.
- (6) Press SW101 or SW102 on the finisher controller PC board and push the alignment plate against the paper.
 - When SW101 is pressed, alignment plate moves 0.42 mm forward.
 - When SW102 is pressed, alignment plate moves 0.42 mm backward.
- (7) When adjustment is complete, remove paper and press SW103 on the finisher controller PC board once to store the adjustment in memory.
- (8) Turn OFF all bits of finisher controller PC board SW104.
- (9) Turn OFF the power and install the rear cover of the finisher unit.

3.14.2 Adjusting the staple position (Finisher unit)

Perform this adjustment after replacing the finisher controller PC board or when the staple position must be changed for some reason. This adjustment adjusts the front/rear stitches with A4/A4-R when the paper used for adjustment is AB type and with LT/LT-R when the paper is INCH type.

- (1) Remove the rear cover of the finisher unit.
- (2) Check that the power is OFF and set SW104 on the finisher controller PC board as follows according to paper/stitch position used for adjustment.

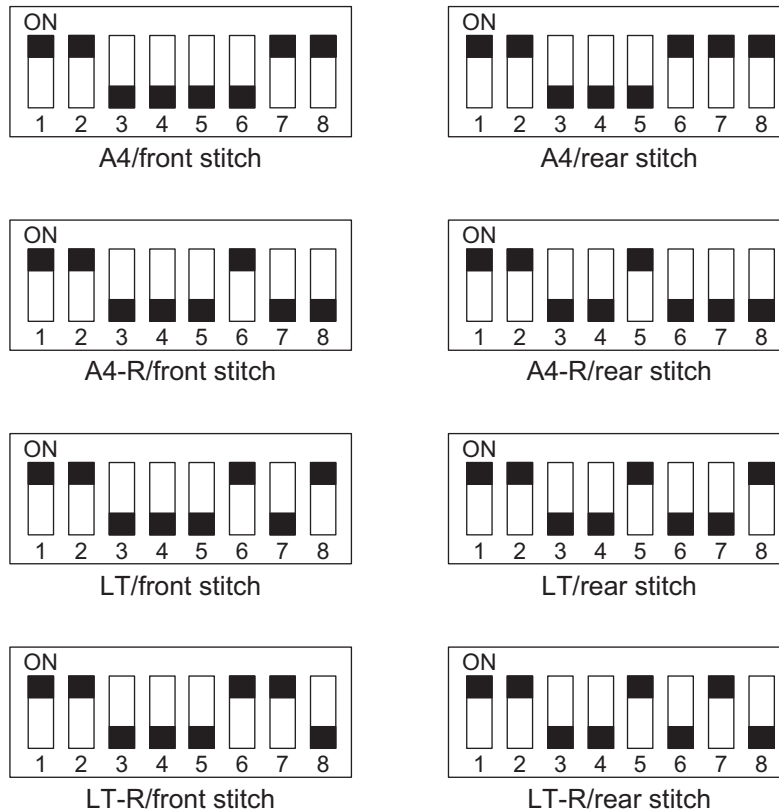


Fig.3-86

- (3) Turn ON the power.
- (4) Press SW103 on the finisher controller PC board.
 - When SW103 is pressed, the swing guide opens and the alignment plate moves to prescribed position.
- (5) Place a sheet of paper between the alignment plates. Push it against the stopper and push the rear edge of the paper against the rear alignment plate. If the gap between the front alignment plate and front edge of the paper is 1 mm or greater, stop the staple position adjustment and repeat the staple position adjustment after completing alignment plate adjustment.
- (6) Press SW103 on the finisher controller PC board once to staple. However, remove the stapled paper manually because the paper is not ejected. Press SW103 on the finisher controller PC board once again.
- (7) Verify the staple position. If any adjustment is needed, proceed to the step 8). If no adjustment is needed, proceed to the step 9).
- (8) Press SW101 or SW102 on the finisher controller PC board to adjust the staple position.
 - When SW101 is pressed, the staple position shifts 0.49 mm to the front side.
 - When SW102 is pressed, the staple position shifts 0.49 mm to the rear side.Repeat the steps 5) to 7).

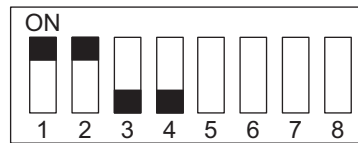
- (9) After confirming that the staple position is adjusted correctly, place a sheet of paper between the alignment plates and push it against the stopper and push the rear edge of the paper against the rear alignment plate. Then press SW103 once. (Stapling is performed and the adjustment value is stored in memory.)
 - The staple position adjustment is completed.
- (10) Turn OFF all bits of SW104 on the finisher controller PC board.
- (11) Turn OFF the power and install the rear cover of the finisher unit.

3.14.3 Adjusting the folding position (Saddle stitcher unit)

The folding position is adjusted by changing setting of bits 6 through 8 of SW504 on the saddle stitcher controller PC board to match the stitching position (adjusting the distance over which the paper positioning plate is moved to the folding position from the stitching position).

If you have replaced the saddle stitcher controller PC board, be sure to set the new SW504 so that the settings will be the same as those on the old SW504. Perform this adjustment if, for any reason, you must change the folding position.

- (1) Check that the power is OFF and separate the finisher from the host machine. If the optional puncher unit is installed, remove it from the finisher.
- (2) Remove the PC board cover and set bits 1 through 4 of SW504 on the saddle stitcher controller PC board as follows:



Do not change bits 5 through 8.

Fig.3-87

- (3) Remove the rear cover, open the inlet cover of the saddle stitcher unit and tape the actuator of inlet cover sensor (PI9) and inlet door switch (SW1).

- (4) Before inserting the paper, mark the top of the paper. You will be using two sheets of A3 or LD paper.

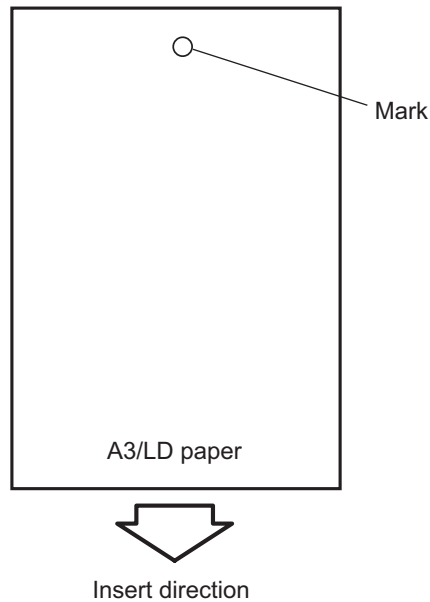


Fig.3-88

- (5) Turn ON the power.
- (6) Press SW1 on the saddle stitcher controller PC board so that the feed motor (M1) starts to rotate. (Press SW1 three seconds or more if LD paper is used.)
- (7) Open the inlet cover and insert two sheets of paper. Push them in by hand until the front edge of the sheets push against the paper positioning plate.
- (8) Close the inlet cover.
- (9) Press SW1 on the saddle stitcher controller PC board.
- The saddle stitcher unit will "stitch" the sheets, and fold and deliver the stack automatically.

- (10) Measure the distance (L) between the stitching position and the folding position. Then perform “positive width adjustment” or “negative width adjustment” to suit the relationship between the stitching position and the folding position.
- If the stitching position is below the folding position, perform “positive width adjustment.”
 - If the stitching position is above the folding position, perform “negative width adjustment.”

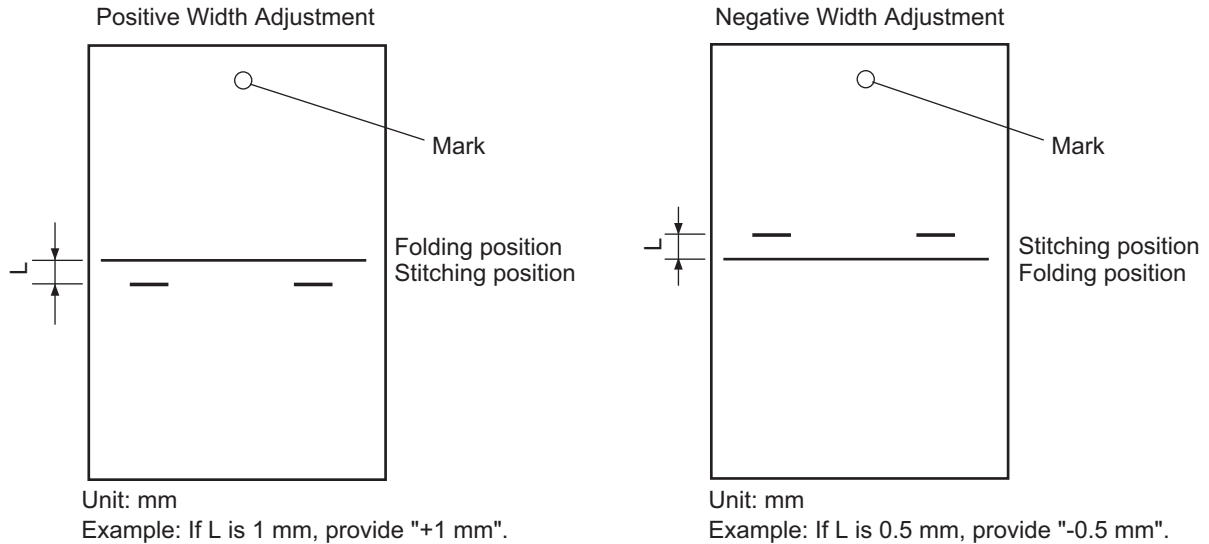


Fig.3-89

- (11) Change the settings of bits 6 through 8 on SW504 referring to the following table.
- If the width adjustment is 0
The stitching position and the folding position match, requiring no change.
 - If for “positive width adjustment”
Set SW504 so that the difference resulting from subtraction of the interval from the appropriate setting in the table below is provided.
Example: If SW504 is currently set to +2 and the interval is +1 mm, set SW504 to reflect - 2.
 - If for “negative width adjustment”
Set SW504 so that the sum resulting from addition of the interval from the appropriate setting in the table below is provided.
Example: If SW504 is currently set to -1 and the interval is -0.5mm, set SW504 to reflect +1.

| DIPSW1 bit settings | | | Setting (in units of 0.5 mm) |
|---------------------|-------|-------|---------------------------------|
| Bit 6 | Bit 7 | Bit 8 | |
| OFF | ON | ON | +3 |
| OFF | ON | OFF | +2 |
| OFF | OFF | ON | +1 |
| OFF | OFF | OFF | 0 |
| ON | OFF | ON | -1 |
| ON | ON | OFF | -2 |
| ON | ON | ON | -3 |

| Do not use the following setting | | |
|----------------------------------|-------|-------|
| Bit 6 | Bit 7 | Bit 8 |
| ON | OFF | OFF |

- (12) Set SW504 bits 1 to 4 to OFF.

3.14.4 Fine adjustment of binding/folding position (Saddle stitcher unit)

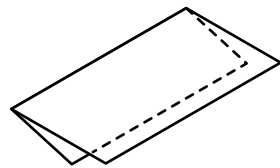
The binding position/folding position can be adjusted in the following (05) codes.

| Code | Paper size | Remarks |
|-------|-------------|---|
| 468-0 | A4-R / LT-R | When the value increases, the binding/folding position shifts toward the right page. (0.25mm/step) Acceptable values: -14 to 14 (Default: 0) |
| 468-1 | B4 | |
| 468-2 | A3 / LD | |

Increase the adjustment value when the sheet of paper which has exited is "A".

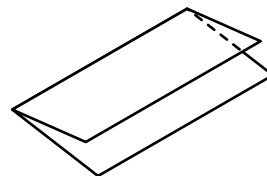
Decrease the adjustment value when the sheet of paper which has exited is "B".

A: When the upper side of the folding is longer than the lower side



← Paper feeding direction

B: When the upper side of the folding is shorter than the lower side



← Paper feeding direction

Fig.3-90

3.14.5 Sensor output adjustment (Puncher unit)

Perform this adjustment when replacing the punch controller PC board, transmittance sensor (photo-sensor PC board/LED PC board), or deflection sensor (scrap full detector PC board unit).

- (1) Check that the power is OFF and then remove the rear cover of the puncher.
- (2) Set SW601 on the punch controller PC board as shown below.

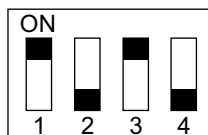


Fig.3-91

- (3) Turn ON the power.
- (4) Press SW602 on the punch controller PC board. Sensor output is adjusted automatically when the switch is pressed.
 - Adjustment is complete if LED601 and LED602 on the punch controller PC board blinks alternately.
- (5) Press SW602 or SW603 on the punch controller PC board to end the adjustment mode and set all bits of SW601 to OFF.
- (6) Turn OFF the power.

3.14.6 Registering the number of punch holes (Puncher unit)

This operation registers which puncher unit is attached to the IC on the punch driver PC board so that the puncher unit can be identified by the finisher. For this reason, this operation must be performed when the punch driver PC board has been replaced.

- (1) Check that the power is OFF and then remove the rear cover of the puncher.
- (2) Set SW601 on the punch controller PC board as shown below.

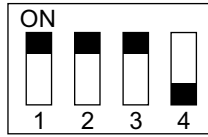


Fig.3-92

- (3) Turn ON the power.
- (4) Press SW602 on the punch controller PC board to select the number of punch holes.
 - The items in the following table are displayed repeatedly from top to bottom each time SW602 is pressed.

| Number of punch holes | LED601/LED602 |
|-----------------------|--------------------------|
| 2 hole (E) | Blinks 1 times per cycle |
| 2/3 hole (N) | Blinks 2 times per cycle |
| 4 hole (F) | Blinks 3 times per cycle |
| 4 hole (S) | Blinks 4 times per cycle |

- (5) Press SW603 on the punch controller PC board. The number of punch holes is registered to the punch controller PC board each time the switch is pressed.
 - Registration is complete if LED601 and LED602 on the punch controller PC board blinks alternately.
- (6) Press SW602 or SW603 on the punch controller PC board to end the adjustment mode and set all bits of SW601 to OFF.
- (7) Turn OFF the power.

4. PREVENTIVE MAINTENANCE (PM)

4.1 PM Support Mode

4.1.1 General description

The timing for the parts replacement usually depends on the number of output pages / develop counts after they were replaced before. However, the life span of them changes depending on the general use of users and the environment in which the equipment is placed. Therefore, it is necessary to consider not only the number of output pages but also the drive counts when deciding the timing for the parts replacement in order to utilize the parts and materials effectively.

In addition, the drum rotates 4 times at color modes to transfer the images of 4 colors on the transfer belt, overlaying one after another. Therefore, the number of output pages is counted as "4" for 1 page for printing at color mode.

This equipment has the PM support mode, which makes it possible to see the general use of each part (the number of output pages, develop counts and drive counts) and replacement record and to do a counter clearing operation more efficiently when replacing.

The replacement record can be printed out in the list printing mode (9S-103).

4.1.2 Operational flow and operational screen

[1] Operational flow

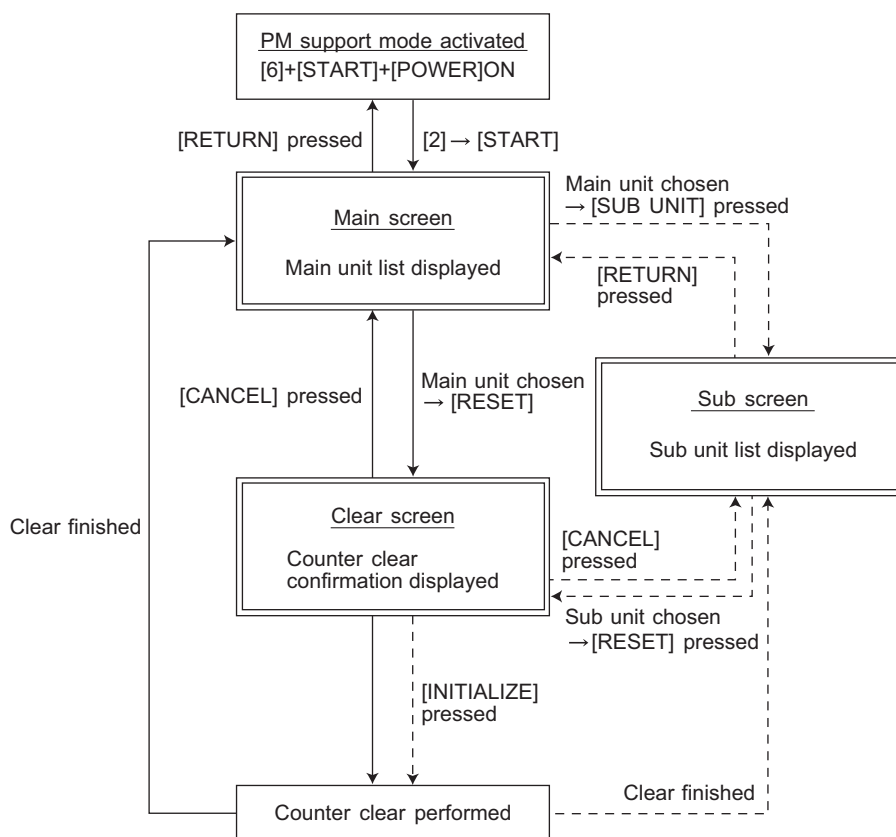


Fig.4-1

- * The screen goes back to the main screen when the counter clear is performed or the [CANCEL] button is pressed after moving from the main screen, while it goes back to the sub screen after moving from the sub screen.

[2] Operational screen

1) Main screen

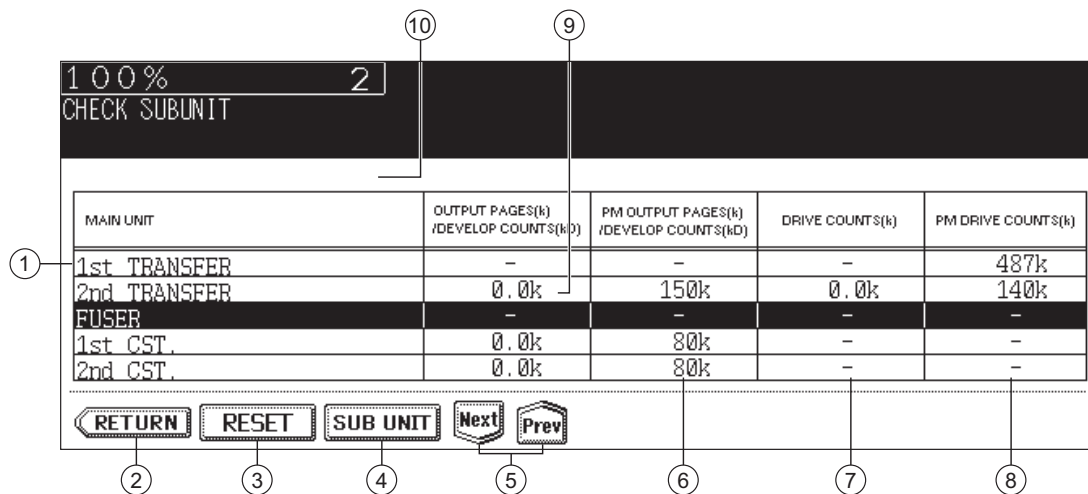


Fig.4-2

- ① Displaying of the main unit name
- ② Back to the PM support mode activation screen
- ③ Moving to the clear screen to clear the selected unit counters ⑨ and ⑦, including all sub unit (parts) counters belonging to that unit When the unit is not selected, all counters are cleared.
- ④ Moving to the sub screen of the selected unit
- ⑤ Moving to the next/previous page
- ⑥ Displaying of the standard number of output pages / develop counts (x1,000) to replace the unit parts
- ⑦ Displaying of the present drive counts (x1,000)
“*” is displayed next to the present number when the number of drive counts has exceeded its PM standard number.
- ⑧ Displaying of the standard number of drive counts (x1,000) to replace the unit parts
- ⑨ Displaying of the present number of output pages/develop counts (x1,000)
When there are differences among the sub units (parts), “_” is displayed and “CHECK SUB-UNIT” is displayed at the top
“*” is displayed next to the present number when the number of output pages or develop counts has exceeded its PM standard number.
- ⑩ Displaying of the number of output pages / develop counts (Page/D. cnt), drive counts (Cnt.) and previous replacement date (Chg.) for a chosen unit
When the replacement date for the sub unit is different, press the [SUB UNIT] button to move to the sub screen and see each information, otherwise information is not displayed

Notes:

1. “—” is always displayed at the drive counts section for the reversing automatic document feeder (RADF) and feed unit.
2. “—” is displayed at the numeric section for the paper source which is not installed since the paper source is different depending on the structure of options.

2) Sub screen

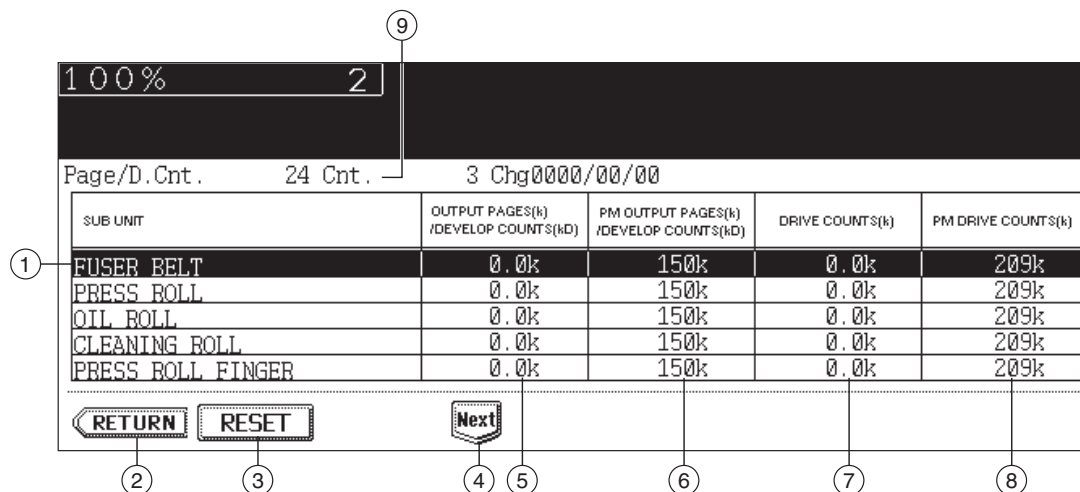


Fig.4-3

- ① Displaying of the sub unit (parts) name
- ② Back to the main screen
- ③ Moving to the clear screen to clear the selected unit (parts) counters
- ④ Moving to the next/previous page
- ⑤ Displaying of the present number of output pages / develop counts (x1,000)
“*” is displayed next to the present number when the number of output pages or develop counts has exceeded its PM standard number.
- ⑥ Displaying of the standard number of output pages / develop counts (x1,000) to replace the sub unit (parts)
- ⑦ Displaying of the present drive counts (x1,000)
“*” is displayed next to the present number when the number of drive counts has exceeded its PM standard number.
- ⑧ Displaying of the standard number of drive counts (x1,000) to replace the sub unit (parts)
- ⑨ Displaying of the number of output pages, develop counts and drive counts and previous replacement date for a chosen sub unit

3) Clear screen

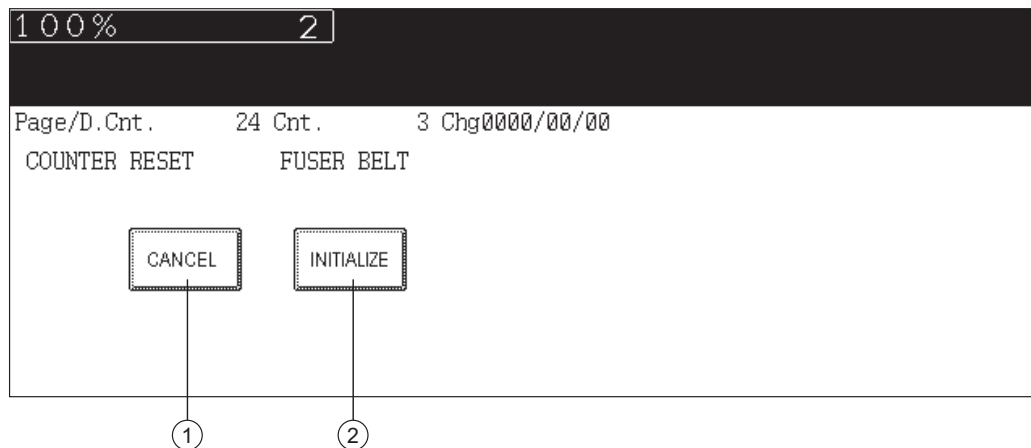


Fig.4-4

- ① When the [CANCEL] button is pressed, the counter is not cleared and the display returns to the main or sub screen..
- ② When the [INITIALIZE] button is pressed, "Present number of output pages/develop counts" and Present driving counts" are cleared and "Previous replacement date" is updated.

[3] Access tree

Note:

The name inside [] is displayed on the LCD screen.

| Main screen | Sub-screen |
|--|--|
| Drum/cleaner unit [CLEANER/DRUM] | Drum [DRUM] Drum cleaning blade [DRUM BLADE] Drum cleaner brush [DRUM BRUSH] |
| Main charger unit [MAIN CHARGER] | Main charger grid [GRID] Main charger wire [MAIN CHARGER WIRE] Main charger wire pad [WIRE CLEANING PAD] |
| Ozone filter [FILTER] | Ozone filter [OZONE FILTER] |
| Black developer unit [BLACK DEVELOPER] | Developer material K [BLACK DEVELOPER] |
| Color developer unit [COLOR DEVELOPER] | Developer material Y [YELLOW DEVELOPER] Developer material M [MAGENTA DEVELOPER] Developer material C [CYAN DEVELOPER] |
| Transfer belt cleaning unit [TRANSFER BELT CLEANER] | Transfer belt cleaning blade [BELT CLEANING BLADE] |
| 2nd transfer roller unit [2nd TRANSFER] | 2nd transfer roller [2nd TRANSFER ROLLER] |
| Fuser unit [FUSER] | Fuser belt [FUSER BELT] Pressure roller [PRESS ROLLER] Oil roller [OIL ROLLER] Cleaning roller [CLEANING ROLLER] Separation finger [PRESS ROLLER FINGER] Fuser belt guide [BELT GUIDE] Pressure roller discharge brush [PRESS ROLLER ERASER BRUSH] |
| Upper drawer [1st CST.] | Pickup roller [PICK UP ROLLER(1st CST.)] Feed roller [FEED ROLLER(1st CST.)] Separation roller [SEP ROLLER(1st CST.)] |
| Lower drawer [2nd CST.] | Pickup roller [PICK UP ROLLER(2nd CST.)] Feed roller [FEED ROLLER(2nd CST.)] Separation roller [SEP ROLLER(2nd CST.)] |
| Bypass unit [SFB] | Pickup roller [PICK UP ROLLER(SFB)] Feed roller [FEED ROLLER(SFB)] Separation roller [SEP ROLLER(SFB)] |
| RADF [RADF] | Pickup roller [PICK UP ROLLER(RADF)] Feed roller [FEED ROLLER(RADF)] Separation roller [SEP ROLLER(RADF)] |
| LCF [LCF] | Pickup roller [PICK UP ROLLER(LCF)] Feed roller [FEED ROLLER(LCF)] Separation roller [SEP ROLLER(LCF)] |
| PPF upper drawer [3rd CST.] | Pickup roller [PICK UP ROLLER(3rd CST.)] Feed roller [FEED ROLLER(3rd CST.)] Separation roller [SEP ROLLER(3rd CST.)] |
| PPF lower drawer [4th CST.] | Pickup roller [PICK UP ROLLER(4th CST.)] Feed roller [FEED ROLLER(4th CST.)] Separation roller [SEP ROLLER(4th CST.)] |

Note:

When the counter value of any of the pickup roller, feed roller and separation roller in each unit is reset, the value of the feeding retry counter is also reset simultaneously. When the [RESET] button is pressed after selecting the feed unit in the Main Screen, the value of the feeding retry counter is also reset simultaneously.

The feeding retry counter:

- Upper drawer Reset the feeding retry counter (08-1390)
- Lower drawer Reset the feeding retry counter (08-1391)
- PFP upper drawer Reset the feeding retry counter (08-1392)
- PFP lower drawer Reset the feeding retry counter (08-1393)
- Bypass unit Reset the feeding retry counter (08-1394)
- LCF Reset the feeding retry counter (08-1395)

4.1.3 Work flow of parts replacement

The timing for the parts replacement usually depends on the number of output pages / develop counts after they were replaced before. However, its drive counts is also to be considered when replacing the parts. Even if the number of output pages has reached the level of replacement, for instance, the part may still be usable with its drive counts not reaching the specified drive counts. On the other hand, the part may need replacement even if the number of output pages has not reached the level of replacement with its driving time exceeding the specified drive counts. The life span of some parts such as feed roller is heavily dependent on the number of output pages rather than the drive counts.

The following work flow diagram shows how to judge the timing of replacement with the number of output pages and the drive counts.

The number of output pages is counted as “4” for 1 page for printing at color modes. This “4” is “develop counts”.

Example 1:

When the number of output pages has reached the specified level

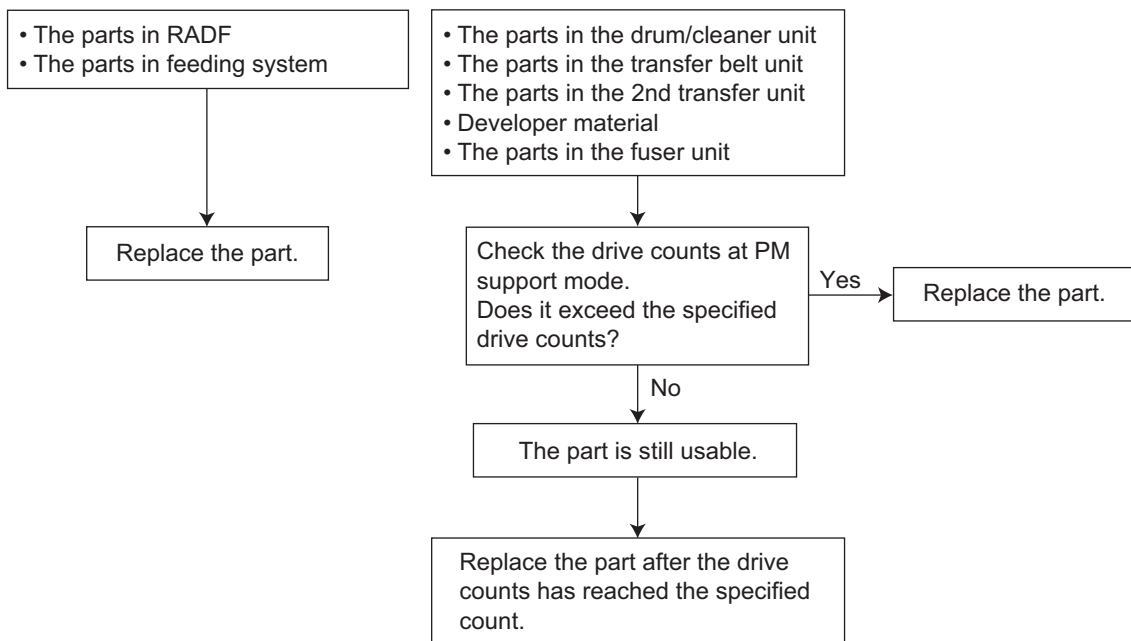


Fig.4-5

Example 2:

When the image failure occurred before the number of output pages has reached the specified level

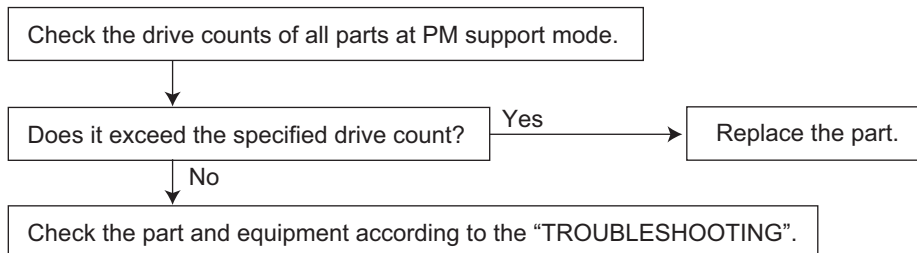


Fig.4-6

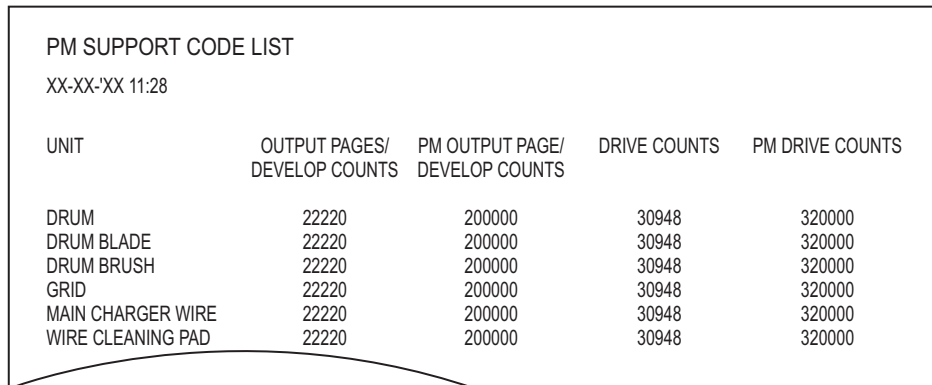
4.2 General Descriptions for PM Procedure

(1) Preparation

- Ask the user about the current conditions of the equipment and note them down.
- Before starting maintenance, make some sample copies and store them.
- See the replacement record and check the parts to be replaced in the PM support mode (6S-2) or list printing mode (9S-103).

6S-2 : [6] + [START] + [POWER] ON → [2] → [START]

9S-103 : [9] + [START] + [POWER] ON → [103] → [START]



PM SUPPORT CODE LIST
XX-XX-XX 11:28

| UNIT | OUTPUT PAGES/ DEVELOP COUNTS | PM OUTPUT PAGE/ DEVELOP COUNTS | DRIVE COUNTS | PM DRIVE COUNTS |
|-------------------|---------------------------------|-----------------------------------|--------------|-----------------|
| DRUM | 22220 | 200000 | 30948 | 320000 |
| DRUM BLADE | 22220 | 200000 | 30948 | 320000 |
| DRUM BRUSH | 22220 | 200000 | 30948 | 320000 |
| GRID | 22220 | 200000 | 30948 | 320000 |
| MAIN CHARGER WIRE | 22220 | 200000 | 30948 | 320000 |
| WIRE CLEANING PAD | 22220 | 200000 | 30948 | 320000 |

Fig.4-7

- Turn OFF the power and make sure to unplug the equipment.
- (2) Perform a preventive maintenance using the following checklist and illustrations. Refer to the Service Manual if necessary.
- (3) Plug in the equipment after the maintenance has been finished. Then turn ON the power and make some copies to confirm that the equipment is working properly.

4.3 Operational Items in Overhauling

Overhaul each equipment with the following timing.

- e-STUDIO281c: When the number of output pages has reached 300,000 or 2.5 years have passed from the start of use (Whichever is earlier.)
- e-STUDIO351c: When the number of output pages has reached 360,000 or 2.5 years have passed from the start of use (Whichever is earlier.)
- e-STUDIO451c: When the number of output pages has reached 450,000 or 2.5 years have passed from the start of use (Whichever is earlier.)

- (1) Replace all the supplies.
- (2) Check the components in the drive section (gears, pulleys, timing belts, etc.). Replace them with new ones if they are damaged.
- (3) Check all the adhesives such as tape and Mylar if they are damaged or have become unstuck. Replace them with new ones if necessary.
- (4) Check the performance of all the switches and sensors. Replace them with new ones if necessary.
- (5) Clean inside the equipment thoroughly.

4.4 Preventive Maintenance Checklist

Symbols/value used in the checklist

| Cleaning | Lubrication/Coating | Replacement | Operation check |
|--|--|---|--|
| A: Clean with alcohol B: Clean with soft pad, cloth or vacuum cleaner | L: Launa 40 Sl: Silicon oil W1: White grease (Molykote X5-6020) W2: White grease (Molykote HP-300) AV: Alvania No.2 FL: Floil (GE-334C) | Value: Replacement cycle (output pages or develop counts) R: Replace if deformed or damaged | O: After cleaning or replacement, confirm there is no problem. |

[Preventive Maintenance Checklist]

Notes:

- Perform cleaning and lubricating in the following timing. Exceptionally, the lubrication for the drum unit, main charger, color developer unit and 1st transfer unit must follow the PM cycle of each unit.
e-STUDIO251c: every 100,000 sheets
e-STUDIO351c: every 120,000 sheets
e-STUDIO451c: every 150,000 sheets
- Value under "Replacement" indicates the replacement cycle, and when the cycle is different for each product, values are indicated in the order of e-STUDIO251c, e-STUDIO351c and e-STUDIO451c. (KS= x 1,000 sheets, KD= x 1,000 developments)
- The replacement cycle of the parts for the charge, development and 1st transfer in copying process is not indicated by the number of output pages (sheet), but the develop counts (development). The number of output pages is counted as "4 developments" for 1 page for printing at color mode, and "1 development" at black-and-white mode.
- The replacement cycle of the parts in the feeding section equals to the number of sheets fed from each paper source.
- Be careful not to put oil on the rollers, belts and belt pulleys when lubricating.
- Page-Item (P-I) is described in the column of the Parts list.

A. Scanner

| | Items to check | Cleaning | Lubrication/Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|-----|-------------------------------------|----------|---------------------|------------------|-----------------|------------------|---------|
| A1 | Original glass | B or A | | | | 25-1 | *a1 |
| A2 | ADF original glass | B | | | | 25-2 | *a1 |
| A3 | Mirror-1 | B | | | | | |
| A4 | Mirror-2 | B | | | | | |
| A5 | Mirror-3 | B | | | | | |
| A6 | Reflector | B | | | | | |
| A7 | Lens | B | | | | 11-10 | |
| A8 | Exposure lamp | | | R | O | 26-6 | |
| A9 | Automatic original detection sensor | B | | | O | 11-12 | |
| A10 | Slide sheet (front and rear) | B or A | | R | | | |

B. Laser unit

| Items to check | | Cleaning | Lubrication/ Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|----------------|----------------|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| B1 | LSU slit glass | B | | | | | |

C. Feed unit

| Items to check | | Cleaning | Lubrication/ Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|----------------|--|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| C1 | Pickup roller | | | 80 | | 18-20 | |
| C2 | Feed roller | | | 80 | | 18-24 | |
| C3 | Separation roller | | AV, W2 | 80 | | 18-5 | *c1 |
| C4 | Transport roller | A | | R | | | |
| C5 | Paper guide | B | | | | | |
| C6 | Drive gear (tooth face and shaft) | | W1 | | | | *c2 |
| C7 | GCB bushing bearing | | L | | | | |
| C8 | One side of the plastic bushing to which the shaft is inserted | | W1 | | | | |
| C9 | Registration roller | A | | R | | 23-15,34 | |
| C10 | Paper dust removal brush | B | | R | | 23-2,30 | *c10 |

D. Automatic duplexing unit

| Items to check | | Cleaning | Lubrication/ Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|----------------|--|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| D1 | Transport roller (upper, middle and lower) | A | | R | | 43-7, 36,56 | |
| D2 | One side of the GCB bushing to which the shaft is inserted | | L | | | | |
| D3 | One side of the plastic bushing to which the shaft is inserted | | W1 | | | | |
| D4 | Paper guide | B | | | | 43-46 | |

E. Bypass feed unit

| Items to check | | Cleaning | Lubrication/ Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|----------------|---------------------|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| E1 | Pickup roller | | | 80 | | 22-26 | |
| E2 | Feed roller | | | 80 | | 22-37 | |
| E3 | Separation roller | | AV, W2 | 80 | | 21-1 | *e1 |
| E4 | Bypass tray | B | | | | | |
| E5 | Drive gear (shaft) | | W1 | | | | |
| E6 | GCB bushing bearing | | L | | | | |
| E7 | Transport roller | A | | R | | 22-4,40 | |

F. Main charger

| | Items to check | Cleaning | Lubrication/ Coating | Replacement (KD) | Operation check | Parts list <P-I> | Remarks |
|----|----------------------------|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| F1 | Main charger case | B | | | | | *f1 |
| F2 | Main charger wire | | | 130/160/200 | O | 28-15 | *f1 |
| F3 | Contact point of terminals | B | | | | 28-4,9 | |
| F4 | Charger wire cleaning pad | | | 130/160/200 | | 28-12 | |
| F5 | Main charger grid | | | 130/160/200 | | 28-21 | |

G. Drum/Cleaner related section

| | Items to check | Cleaning | Lubrication/ Coating | Replacement (KD) | Operation check | Parts list <P-I> | Remarks |
|----|--------------------------------|----------|-------------------------|---------------------|--------------------|---------------------|------------------------|
| G1 | Photoconductive drum | | | 130/160/200 | | 103-1 | Refer to Chapter 4.8.2 |
| G2 | Drum stay | B | | | | | *g1 |
| G3 | Whole cleaner unit | B | | | | | |
| G4 | Drum cleaning blade | | | 130/160/200 | | 32-10 | *g2 |
| G5 | Drum cleaner brush | | | 130/160/200 | | 32-5 | *g2 |
| G6 | Recovery blade | B | | R | | 32-26 | *g3 |
| G7 | Used toner auger drive section | | W1 | | | | |
| G8 | Discharge LED | B | | | | 28-32 | |
| G9 | Ozone filter | | | 130/160/200 | | 14-31 | |

Note:

Check the color deviation after replacing G1 and G4.

H. Toner bag

| | Items to check | Cleaning | Lubrication/ Coating | Replacement (KD) | Operation check | Parts list <P-I> | Remarks |
|----|----------------|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| H1 | Toner bag | | | 50 | | 103-6 | |

I. Black developer unit

| Items to check | | Cleaning | Lubrication/ Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|----------------|------------------------------------|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| I1 | Whole black developer unit | B | | | | | |
| I2 | Black developer unit drive section | | W1 | | | | |
| I3 | Developer material (K) | | | 100/120/150 | | 103-2 | *i1 |
| I4 | Front shield | B | | R | | 34-39 | |
| I5 | Oil seal (4 pcs.) | | AV | R | | 34-3,15 | *i2 |
| I6 | Guide roller | B or A | | | | 34-17 | |
| I7 | Toner cartridge drive gear | | W1 | | | | |
| I8 | Side shield | B | | R | | 34-37,38 | |
| I9 | Front bearings of mixers | | AV | R | | 34-8 | *i3 |

J. Color developer unit / Revolver unit

| Items to check | | Cleaning | Lubrication/ Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|----------------|---|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| J1 | Whole color developer unit (Y, M and C) | B | | | | | |
| J2 | Color developer unit drive section (Y, M and C) | | W1 | | | | |
| J3 | Developer material (Y, M, and C) | | | 24/30/37.5 | | 103-3 | *j1 |
| J4 | Front shield (Y, M and C) | B | | R | | 33-24 | |
| J5 | Oil seal (4 pcs. for each color) | | AV | R | | 33-4,14 | *j2 |
| J6 | Toner cartridge drive gear (Y, M and C) | | W1 | | | | |
| J7 | Revolver drive gear | | W1 | | | | |
| J8 | Color auto-toner sensor | B | AV | | | 36-18 | *j3 |
| J9 | Side shield | B | | R | | 33-39,40 | |
| J10 | Polarity adjustment plate | | FL | | | 33-9 | *j4 |
| J11 | Color toner cartridge sensor | B | | | | 36-104 | *j5 |
| J12 | Front bearings of mixers | | AV | R | | 33-12 | *j6 |

K. Transfer belt unit / Transfer belt cleaning unit

| | Items to check | Cleaning | Lubrication/ Coating | Replacement (KD) | Operation check | Parts list <P-I> | Remarks |
|-----|---|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| K1 | Transfer belt | B | | R | | 29-31 | |
| K2 | 1st transfer roller | | | R | | 29-14 | |
| K3 | Drive roller | A | | R | | 30-7 | *k1 |
| K4 | 2nd transfer facing roller | A | | R | | 30-15 | *k1 |
| K5 | Transfer belt home position sensor (2 pcs.) | B | | | | 29-9 | *k2 |
| K6 | Transfer belt cleaning blade | | | 130/160/200 | | 31-8 | |
| K7 | Transfer belt recovery blade | B | | R | | 31-16 | *k3 |
| K8 | Blade seal (front side) | | | 130/160/200 | | 31-10 | |
| K9 | Blade seal (rear side) | | | 130/160/200 | | 31-12 | |
| K10 | Blade mylar (front side) | | | 130/160/200 | | 31-9 | |
| K11 | Blade mylar (rear side) | | | 130/160/200 | | 31-11 | |

Note:

Check the color deviation after replacing K1, K2 and K6.

L. 2nd transfer roller unit

| | Items to check | Cleaning | Lubrication/ Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|----|----------------------|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| L1 | 2nd transfer roller | | | 200/240/300 | | 13-19 | |
| L2 | Paper guide | B | | | | | |
| L3 | Image quality sensor | B | | | | 23-24 | *11 |

Note:

Check the color deviation after replacing L1.

M. Fuser unit

| Items to check | | Cleaning | Lubrication/ Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|----------------|---------------------------------|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| M1 | Fuser belt | | | 100/120/150 | | 39-1 | |
| M2 | Pressure roller | | | 100/120/150 | | 42-5 | |
| M3 | Separation finger | | | 100/120/150 | | 42-25 | *m1 |
| M4 | Oil roller | | | 100/120/150 | | 42-22 | |
| M5 | Cleaning roller | | | 100/120/150 | | 42-11 | |
| M6 | Thermistor (3 pcs.) | A | | R | | | *m2 |
| M7 | Fuser unit drive gear | | W1 | | | | |
| M8 | Exit roller | A | | | | | |
| M9 | Fuser belt guide | | | 100/120/150 | | 42-18 | |
| M10 | Separation roller | | W2 | | | 41-2 | *m3 |
| M11 | Pressure roller discharge brush | | | 100/120/150 | | 39-1 | |

N. RADF (MR-3018)

| Items to check | | Cleaning | Lubrication/ Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|----------------|------------------------------|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| 1 | Pickup roller | A | | 120 | | 5-1 | |
| 2 | Separation roller | A | | 120 | | 4-10 | |
| 3 | Feed roller | A | | 120 | | 5-1 | |
| 4 | Registration roller | A | | | | | |
| 5 | Intermediate transfer roller | A | | | | | |
| 6 | Front read roller | A | | | | | |
| 7 | Platen roller | A | | | | | |
| 8 | Rear read roller | A | | | | | |
| 9 | Reverse registration roller | A | | | | | |
| 10 | Exit/reverse roller | A | | | | | |
| 11 | Platen sheet | B or A | | | | | |

O. PFP (KD-1011)

| Items to check | | Cleaning | Lubrication/ Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|----------------|---------------------------------|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| O1 | Pickup roller (upper/lower) | A | | 80 | | 5-29 | |
| O2 | Feed roller (upper/lower) | A | | 80 | | 5-26 | |
| O3 | Separation roller (upper/lower) | A | AV, W2 | 80 | | 5-112 | *o1 |
| O4 | Drive gear (tooth face) | | W1 | | | | |

P. LCF (KD-1012)

| Items to check | | Cleaning | Lubrication/ Coating | Replacement (KS) | Operation check | Parts list <P-I> | Remarks |
|----------------|----------------------------|----------|-------------------------|---------------------|--------------------|---------------------|---------|
| P1 | Pickup roller | A | | 160 | | 4-30 | |
| P2 | Feed roller | A | | 160 | | 4-28 | |
| P3 | Separation roller | A | | 160 | | 5-12 | |
| P4 | Drive gear (tooth face) | | W1 | | | | |

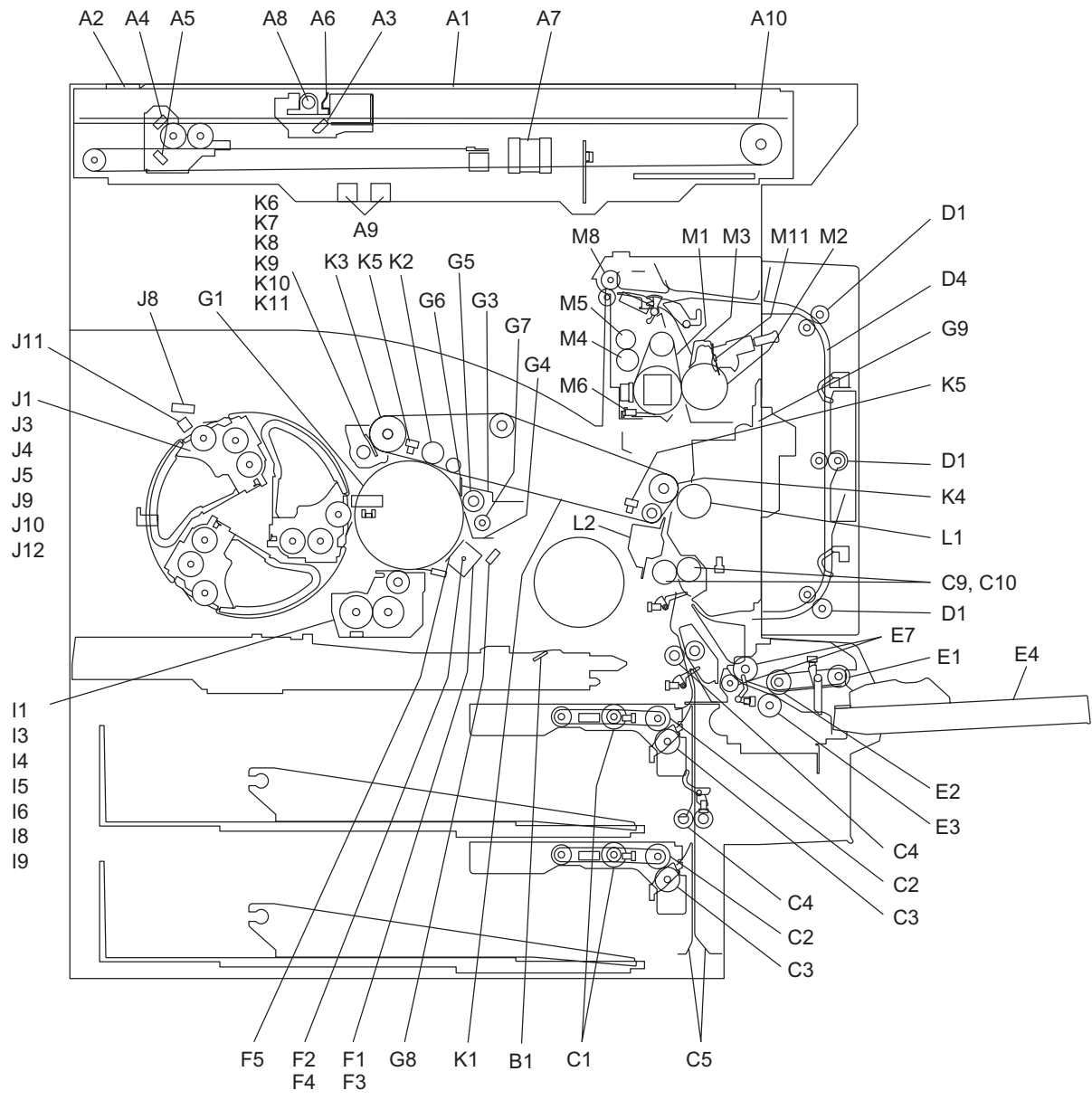


Fig.4-8 Front side

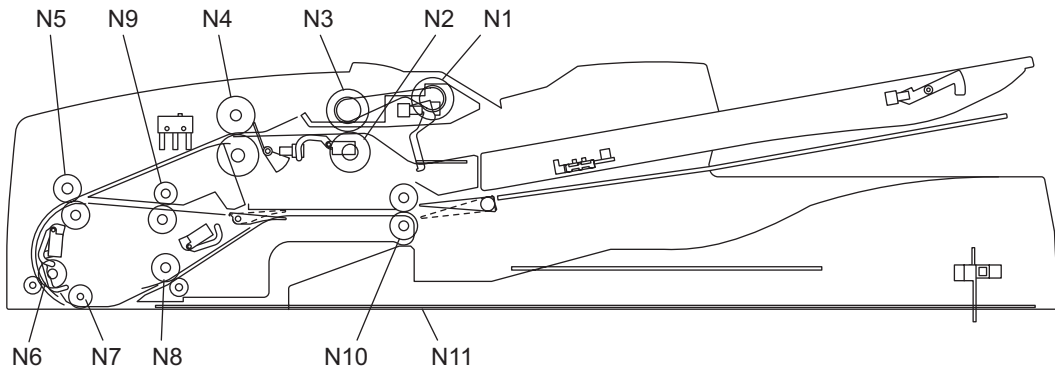


Fig.4-9

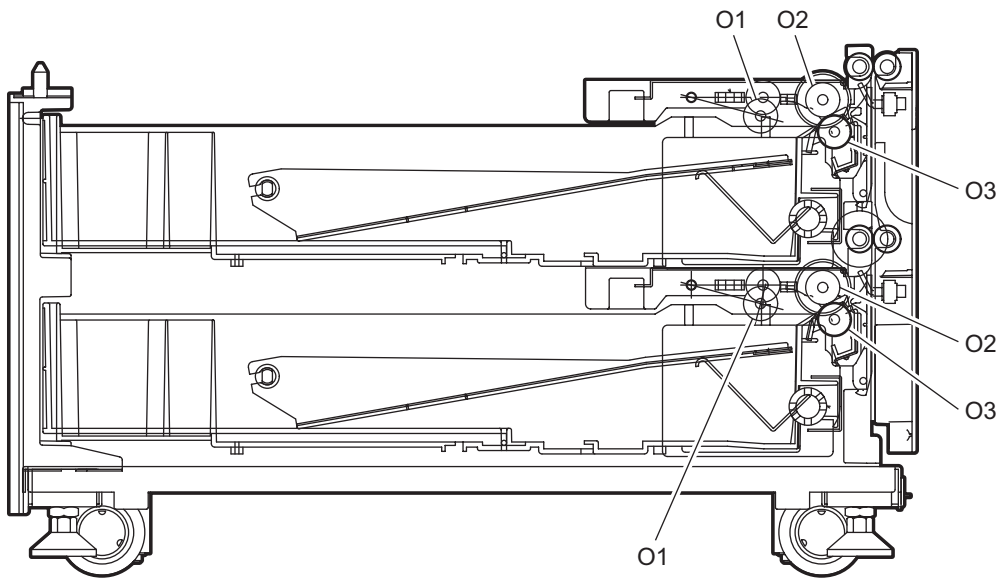


Fig.4-10 Paper Feed Pedestal (PFP)

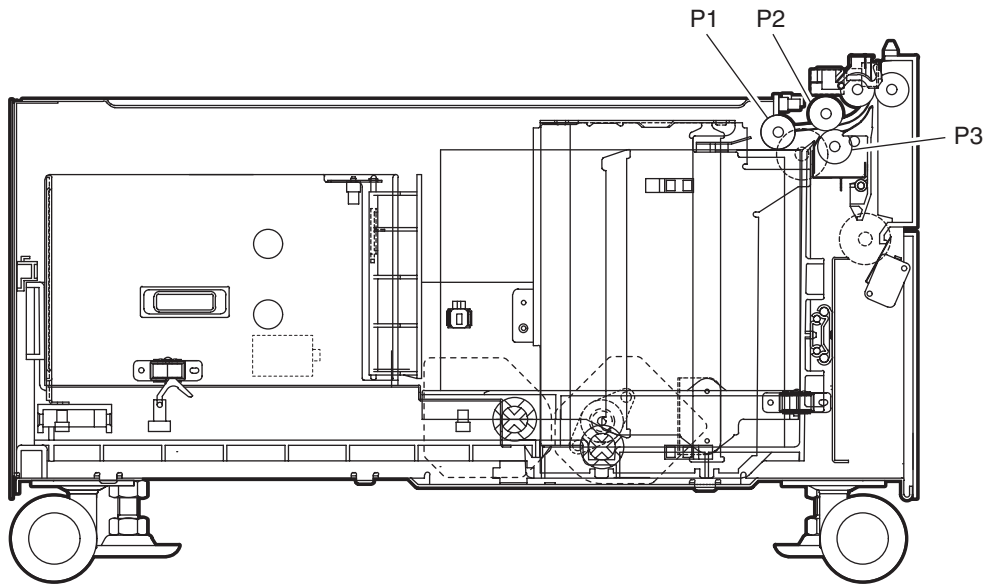


Fig.4-11 Large Capacity Feeder (LCF)

Remarks “*” in the Preventive Maintenance Check List

- * a1. Original glass, ADF original glass
Clean both sides of the original glass and ADF original. Make sure that there is no dust on the mirrors-1, -2, -3 and lens after cleaning. Then install the original glass and ADF original glass.

Note:

Make sure that there is no fingerprints or oil staining on part of the original glass on where the original scale is mounted since the shading correction plate is located below the scale to be scanned.

- * c1, o1. Separation roller (Feed unit, PFP)
Apply an even coat of grease (Alvania No.2) to all round the inside of the spring.
When replacing the separation roller, apply adequate amount of white grease (Molykote HP-300) on the places of the holder shown in the figure (4 places).

Note:

Make sure that the grease does not adhere to the roller surface. Wipe it off with alcohol if adhered.

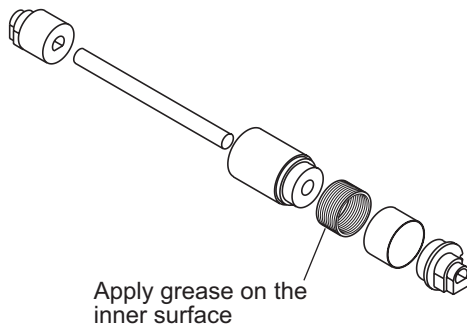


Fig.4-12

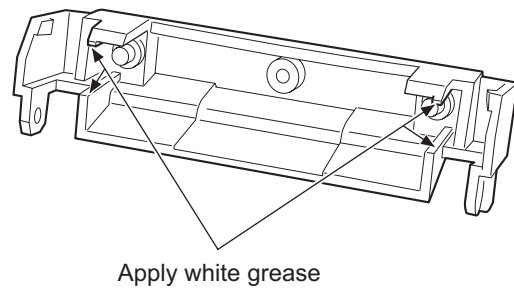


Fig.4-13

- * c2. Drive gears in the paper feeding section (teeth of gears and shafts)
Apply some white grease (Molykote X5-6020) to the teeth of gears and shafts of the drive gears.

Note:

Make sure that oil is not running over or scattered around as the gear is rotated coming into the clutch after applying molykote to the gear which is located near the clutch. The quantity of molykote should be smaller than that to be applied to the other parts.

- * c10. When installing the intermediate guide after cleaning the paper dust removal brush attached to it, check whether 2 hooks are fitted in and boss "A" in the figure is inserted into its groove correctly.

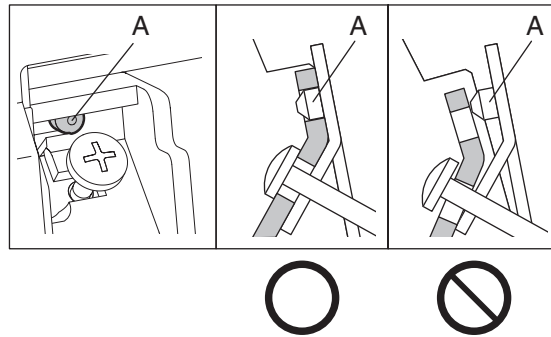


Fig.4-14

- * e1. Separation roller (SFB)
Apply an even coat of grease (Alvania No.2) to all round the inside of the spring.
When replacing the separation roller, apply adequate amount of white grease (Molykote HP-300) on the places of the holder shown in the figure (4 places).

Note:

Make sure that the grease does not adhere to the roller surface. Wipe it off with alcohol if adhered.

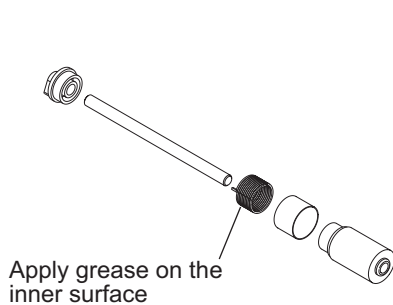


Fig.4-15

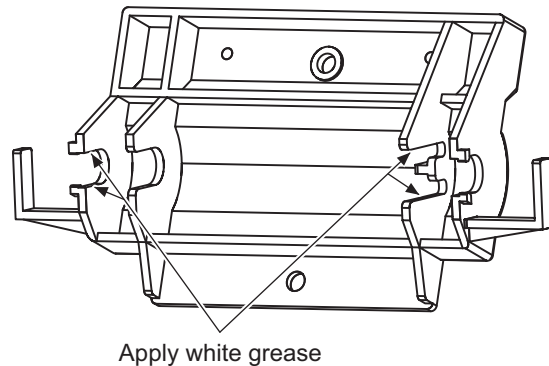


Fig.4-16

- * f1. Main charger case / Main charger wire
Clean the main charger case and wire with a cloth soaked in water and squeezed tightly, and then wipe them with a dry cloth.

Note:

- Be careful of the following when attaching a new wire (length: 373 mm).
- Insert the wire securely into the V-grooves of the front and rear sides.
 - Do not twist the wire.
 - Do not touch the wire with your bare hand.

- * g1. Drum stay
If toner accumulates on the drum stay, take off the drum stay from the process unit and clean it with an electric vacuum cleaner. Also, remove any toner stains around the drum stay with a cloth.

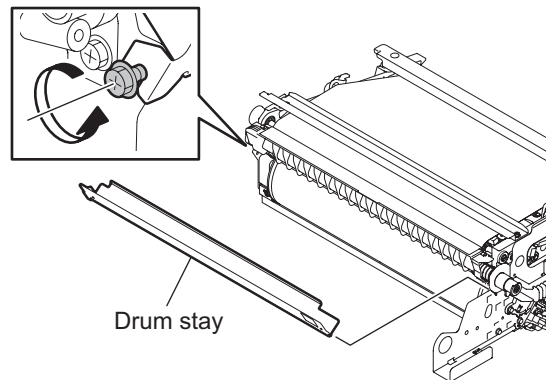


Fig.4-17

- * g2. Drum cleaning blade / Drum cleaner brush
Since the edge of the blade is vulnerable and can be easily damaged by factors such as the adherence of paper dust. Replace the cleaning blade and brush with new ones if poor images are copied due to the damaged blade regardless of the number of output pages which have been made.
- * g3. Recovery blade
Replace the recovery blade regardless the number of output pages if the edge of the blade get damaged.
- * i1, j1. Developer material
After replacing the developer material, be sure to perform the auto-toner adjustment and then image quality control initialization (Ch.3.2).
- * i2, j2. Oil seal
Mixer unit (Rear side of mixers-1 & -2) 2 pcs.
Developer sleeve 2 pc.

Notes:

1. Lubricate the oil seal only when the oil seal is replaced
2. When exchanging the oil seal of the mixer unit, replace "i3, j6. Front bearings of mixer" at the same time.

During replacement, coat the oil seal with grease (Alvania No.2).

- (1) Push in a new oil seal parallel to the mounting hole section of the developer frame or outside of the nozzle mixer.
 - * Pay attention to the direction in which the oil seal is attached. (See figure on right.)
- (2) Apply an even coat of grease to the inside of the oil seal.
 - Amount: About two small drops
- (3) Wipe off any grease exuded from the inside.

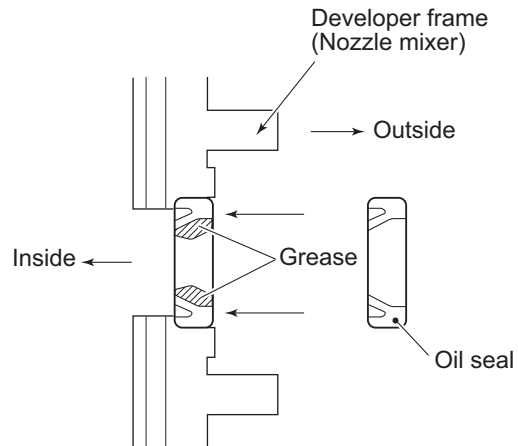


Fig.4-18

- * i3, j6. Front bearings of mixers
When exchanging the oil seals (rear side of mixer-1 and -2) replace the front bearings of mixer-1 and -2 at the same time. Since the oil seal is attached to the front bearings of mixer-1 and -2, apply grease when replacing them referring to *i2, j2.
- * j3. Color auto-toner sensor
Clean the color auto-toner sensor as follows:
 - 1) Pull the sensor case of the color auto-toner sensor unit toward you, then remove 1 screw to take off the sensor shutter. Clean the surface of the sensor with a cotton swab or soft cloth with sufficient alcohol filled in.

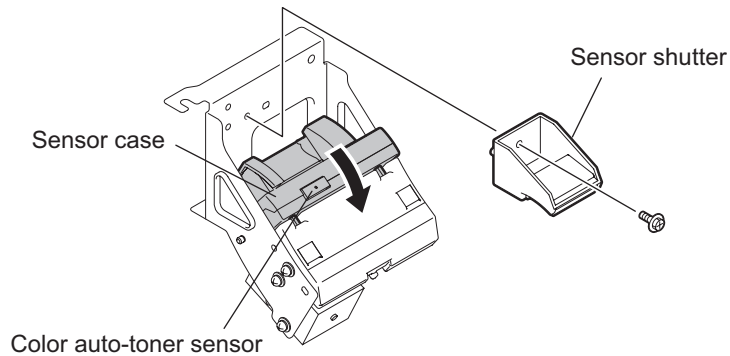


Fig.4-19

- 2) Clean the reference plate of the sensor shutter by blowing off the toner dust with the blower brush or the air spray cleaner etc.

Note:

When you clean the reference plate, never touch it directly with the cleaning brush etc. as the surface of the reference plate is fragile.

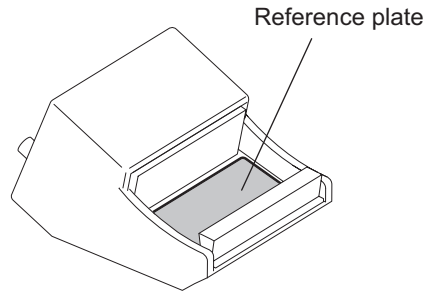


Fig.4-20

- * j4. Polarity adjustment plate
Apply two-rice-grain-amount of FLOIL (GE-334C) to the polarity adjustment plate (feeding terminal).

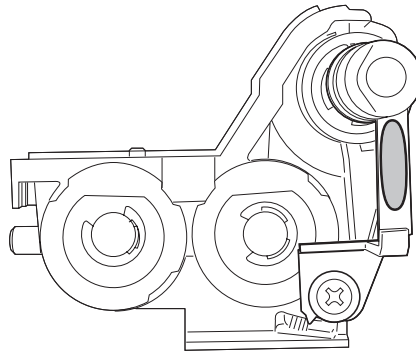


Fig.4-21

- * j5. Color toner cartridge sensor
Perform the cleaning of the surface of the color toner cartridge sensor when you replace the color developer unit (e-STUDIO281c: 24,000 sheets / e-STUDIO351c: 30,000 sheets / e-STUDIO451c: 37,500 sheets).
- * k1. Transfer belt drive roller -1, -2
Fully clean up the toner and such adhered to the roller with alcohol since an image failure may occur if there are any bolts remaining on the roller.

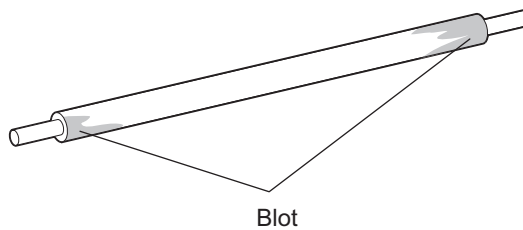


Fig.4-22

- * k2. **Transfer belt home position sensor**
Clean each surface of transfer belt home position sensors (2 pcs.) with a dry cloth when replacing the transfer belt.

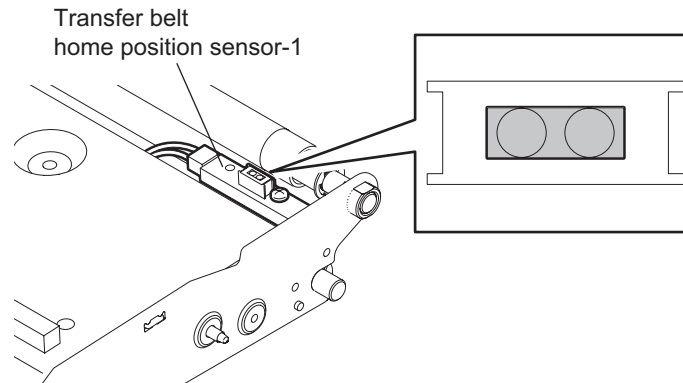


Fig.4-23

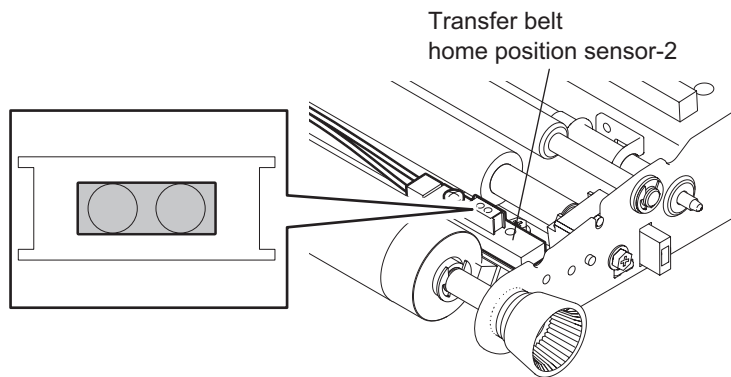


Fig.4-24

- * k3. **Transfer belt recovery blade**
Clean the surface of transfer belt recovery blade with a cloth soaked in water and tightly squeezed, and the wipe it with a dry cloth when replacing the transfer belt cleaning blade. If the edge of recovery blade is damaged, replace the blade regardless of the number of output pages.
- * l1. **Area around image quality sensor**
Clean the shutter of the image quality sensor and around it. Do not touch the sensor head inside the shutter.
- * m1. **Separation finger**
The paper jam may be caused if the tip of the finger is damaged or deformed. If there is any problem with it, replace the finger with a new one regardless of the number of output pages which have been made. Do not damage the tip of the finger during the cleaning. The finger may be damaged if the toner adhering to the tip of it is scraped off forcibly. Replace the finger if the toner is sticking to it heavily.

- * m2. Thermistor
Clean the thermistor with alcohol if the toner or dirt is sticking to it when the fuser roller is replaced. Do not deform or damage the thermistor during the cleaning. Replace the thermistor with a new one if it is damaged or deformed regardless of degree.
- * m3. Separation roller
When replacing the transfer belt, apply some White Molykote (HP-300) on both ends of the separation roller shaft.

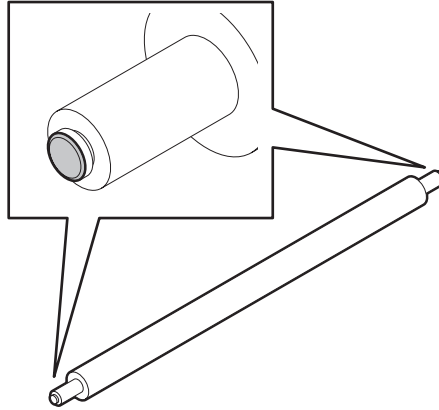


Fig.4-25

4.5 PM KIT

| KIT name | Component | Part name | Qty. |
|-----------------|---------------------------------|---------------------|------|
| EPU-KIT-281C | Drum cleaning blade | BL-3511D | 1 |
| | Main charger wire | WIRE-CHARGR-373 | 1 |
| | Main charger grid | GRID-220 | 1 |
| | Drum cleaner brush | B-281C | 1 |
| | Ozone filter | FILTER-OZ-SPB-600 | 1 |
| | Charger wire cleaning pad | ASYS-PAD-CHARGR-350 | 1 |
| | Belt cleaning blade* | BL-281CTR | 1 |
| DEV-KIT-281CCLR | Developer material (Y) | D-281C-Y | 1 |
| | Developer material (M) | D-281C-M | 1 |
| | Developer material (C) | D-281C-C | 1 |
| | Cleaning jig | JIG-CLEAN-DOC | 1 |
| DEV-KIT-281C | Developer material (K) | D-3511-K | 1 |
| | Cleaning jig | JIG-CLEAN-DOC | 1 |
| | 2nd transfer roller | CR-281CTR2 | 1 |
| FR-KIT-281C | Fuser belt | BT-3511-FU | 1 |
| | Pressure roller | HR-3511-L | 1 |
| | Separation finger | SCRAPR-FUS-350 | 1 |
| | Oil roller | SR-3511U | 1 |
| | Cleaning roller | B-281CU | 1 |
| | Fuser belt guide | COLOR-HR-IN-N | 2 |
| | Pressure roller discharge brush | BRUSH-FUS-PR | 1 |
| ROL-KIT-16CST | Pick up roller | ROLLER-PICK-AT | 1 |
| | Feed roller | K-ROLL-FEED | 1 |
| | Separation roller | K-ROLL-SPT | 1 |
| ROL-KIT-1010 | Pick up roller | ROL-PICK-UP | 1 |
| | Feed roller | ROL-PAPER-FED-F | 1 |
| | Separation roller | ROL-PAPER-FED-S | 1 |
| DF-KIT-3018 | Pick up roller | ASYS-ROL-FEED | 1 |
| | Feed roller | ASYS-ROL-FEED | 1 |
| | Separation roller | ASYS-ROL-RET | 1 |

* The following seals and Mylar sheets are attached to the Belt cleaning blade.

| Name | Part name | Qty. |
|--------------------------|------------------------|------|
| Blade seal (front side) | SEAL-SIDE-CLN-TBU-F-1 | 1 |
| Blade seal (rear side) | SEAL-SIDE-CLN-TBU-R-1 | 1 |
| Blade mylar (front side) | ASYS-SEAL-SIDE-CLT-F-1 | 1 |
| Blade mylar (rear side) | ASYS-SEAL-SIDE-CLT-R-1 | 1 |

4.6 Jig List

| Item | Parts list | |
|-------------------------------|------------|------|
| | Page | Item |
| Door switch jig | 101 | 1 |
| Test chart (A4) | 101 | 3 |
| Test chat (LT) | 101 | 3 |
| Test chart No. TCC-1 (A4) | 101 | 2 |
| Test chart No. TCC-1 (LT) | 101 | 2 |
| Doctor blade cleaning jig | 101 | 4 |
| Downloading jig (DLM board) | 102 | 1 |
| Wire holder jig | 101 | 5 |
| Download JIG-2 (6 Flash ROMs) | 102 | 2 |
| Download JIG-1 (2 Flash ROMs) | 102 | 3 |
| ROM writer adapter (For 1881) | 102 | 4 |
| ROM writer adapter (For 1931) | 102 | 5 |
| Doctor sleeve jig | 101 | 7 |
| Developer material nozzle | 101 | 8 |
| Belt tenstion jig (spring) | 101 | 20 |

4.7 Grease List

| Grease name | Part name | Volume | Container | Parts list | |
|------------------------------------|-----------------|--------|-----------|------------|------|
| | | | | Page | Item |
| SI Silicon oil | ASM-SILICONE-1M | 100 cc | Bottle | 101 | 8 |
| L Launa 40 | OIL-LAUNA40-100 | 100 cc | Oiler | 101 | 9 |
| W1 White grease (Molykote X5-6020) | MOLYKOTE-100 | 100 g | Tube | 101 | 12 |
| W2 White grease (Molykote HP-300) | ASM-PG-HP300-S | 100 g | Bottle | 101 | 10A |
| W2 White grease (Molykote HP-300) | GREASE-HP-S | 10 g | Bottle | 101 | 10B |
| AV Alvania No.2 | ASM-PG-ALV2 | 100 g | Tube | 101 | 11 |
| FL Floil (GE-334C) | ASM-PG-GE334C-S | 20 g | Bottle | 101 | 13 |

4.8 Precautions for Storing and Handling Supplies

4.8.1 Precautions for storing TOSHIBA supplies

- 1) Toner/Developer
Toner and developer should be stored in a place where the ambient temperature is between 10°C to 35°C (no condensation), and should also be protected against direct sunlight during transportation.
- 2) Photoconductive drum
Like the toner and developer, photoconductive drum should be stored in a dark place where the ambient temperature is between 10°C to 35°C (no condensation). Be sure to avoid places where drums may be subjected to high humidity, chemicals and/or their fumes.
- 3) Drum cleaning blade / Transfer belt cleaning blade
This item should be stored in a flat place where the ambient temperature is between 10°C to 35°C, and should also be protected against high humidity, chemicals and/or their fumes.
- 4) Transfer belt / Transfer roller / Fuser belt / Pressure roller
Avoid places where the rollers may be subjected to high humidity, chemicals and/or their fumes.
- 5) Oil roller / Cleaning roller
Avoid places where the rollers may be subjected to high humidity, chemicals and/or their fumes. They should also be stored “horizontally” on a flat surface.
- 6) Paper
Avoid storing copy paper in places where it may be subjected to high humidity. After a package is opened, be sure to place and store it in a storage bag.

4.8.2 Checking and cleaning of photoconductive drum

- 1) Use of gloves
If fingerprints or oil adhere to the drum surface, the property of the photosensitive drum may degrade, affecting the quality of the copy image. So, do not touch the drum surface with bare hands.
- 2) Handling precautions
As the photoconductive drum surface is very sensitive, be sure to handle the drum carefully when installing and removing it so as not damage its surface.
Be sure to apply “patting powder” (lubricant) to the entire surface of the drum (including both ends of the drum where OPC is not coated) when replacing the drum. When the drum has been replaced with a new one, the drum counter (setting mode (08-1150-0, 3, 6 and 7) must be cleared to 0 (zero). This clearing can be performed in PM support mode.

Notes:

1. Application of the patting powder is for reducing the friction between the drum and cleaning blade. If the application of patting powder is neglected, the drum and cleaning blade may be damaged.
2. When paper fibers or dirt adhere to the cleaning blade edge, they may reduce the cleaning efficiency and, in addition, may damage the blade and the drum. Be sure to remove any fibers found adhering to the blade.

- 3) Installation of equipment and storage of drum
Avoid installing the equipment where it may be subjected to high temperature, high humidity, chemicals and/or their fumes.
Do not place the drum in a location where it is exposed to direct sunlight or high intensity light such as near a window. Otherwise the drum will fatigue, and will not produce sufficient image density immediately after being installed in the equipment.
- 4) Cleaning the drum
At periodic maintenance calls, wipe the entire surface of the drum clean using the designated cleaning cotton. Use sufficiently thick cleaning cotton (dry soft pad) so as not to scratch the drum surface inadvertently with your fingertips or nails. Also, remove your rings and wristwatch before starting cleaning work to prevent accidental damage to the drum.
Do not use alcohol, selenium refresher and other organic solvents or silicon oil as they will have an adverse effect on the drum.
- 5) Scratches on photoconductive drum surface
If the surface is scratched in such a way that the aluminum substrate is exposed, no copy image will be produced on this area. In addition, the cleaning blade will be damaged so replacement with a new drum will be necessary.
- 6) Collecting used photoconductive drums
Regarding the recovery and disposal of used photoconductive drums, we recommend following the relevant local regulations or rules.

4.8.3 Checking and cleaning of drum cleaning blade and transfer belt cleaning blade

- 1) Handling precautions
Pay attention to the following points as the cleaning blade life is determined by the condition of its edge:
 - Do not allow hard objects to hit or rub against blade edge.
 - Do not rub the edge with a cloth or soft pad.
 - Do not leave oil (or fingerprints, etc.) on the edge.
 - Do not apply solvents such as paint thinner to the blade.
 - Do not allow paper fibers or dirt to contact the blade edge.
 - Do not place the blade near a heat source.
- 2) Cleaning procedure
Clean the blade edge with a cloth moistened with water and squeezed lightly.

4.8.4 Handling of drum cleaner brush

Do not touch the brush surface with bare hands.

4.8.5 Handling of transfer belt

- 1) Do not touch the transfer belt surface with bare hands.
- 2) Prevent oil or other foreign matter from adhering to the transfer belt surface.
- 3) Do not touch the transfer belt with alcohol or any other organic solvent.
- 4) Do not apply external pressure that might scratch the transfer belt.
- 5) When replacing the belt and transfer belt cleaning unit, apply patting powder sufficiently and evenly. Otherwise, it may reduce the cleaning efficiency.
- 6) When replacing the transfer belt, clean the drive roller-1 drive roller-2, and tension roller with a solvent such as alcohol, and then attach the transfer belt.

4.8.6 Checking and cleaning of fuser belt and pressure roller

1) Handling precautions

Fuser belt

- Do not touch the fuser belt surface with bare hands.
- Prevent oil or other foreign matter from staining the fuser belt surface.
- Do not allow alcohol or any other organic solvent to contact with the fuser belt.
- Do not apply external pressure that might scratch the fuser belt.

Pressure roller

- Do not leave any oil (fingerprints, etc.) on the pressure roller.
- Be careful not to allow any hard object to hit or rub against the pressure roller, or it may be damaged, possibly resulting in poor cleaning.

2) Checking

- Check for stain and damage on the fuser belt and pressure roller, and clean if necessary.
- Check the separation guide and fingers and check for chipped tips.
- Check the cleaning effect of the cleaning roller.
- Check the thermistors for proper contact with the pressure roller.
- Check the fused and fixed condition of the toner.
- Check the gap between the inlet guide and pressure roller.
- Check the fuser belt for proper transportation.
- Check the pressure roller for proper rotation.

3) Cleaning procedure

When the fuser belt and pressure roller become dirty, they will cause jamming. If this happens, wipe the surface clean with a suitable cloth. For easier cleaning, clean the belt and roller while they are still warm.

Note:

Be careful not to rub the fuser belt and pressure roller surface with your nails or hard objects because it can be easily damaged. Do not use silicone oil on the fuser belt and pressure roller.

4) Checking after the assembly of the fuser belt unit

After the assembly, rotate the fuser belt for a round to confirm that the belt is neither folded nor scratched.

A folded or scratched belt may be broken when it is in use.

Note:

Never rotate the fuser belt in the reverse direction as it will cause deformation of the thermistor and discharge brush.

4.8.7 Checking and replacing the oil roller and cleaning roller

1) Handling precautions

Never allow solvents such as paint thinner to touch to the oil/cleaning rollers.

2) Poor cleaning and corrective treatment

Judgment should be made depending on how much toner has been deposited on the fuser belt surface. When its surface is stained with toner, check the oil roller and cleaning roller. If toner is heavily adhered on the oil/cleaning rollers, it means the cleaning performance is declined and the oil/cleaning rollers should be replaced with new ones.

The oil/cleaning rollers are gradually degraded due to subjection to the heat from the fuser belt over a long period of time. Replace them after the specified number of output pages have been made.

4.8.8 Checking and cleaning of discharge brush

1) Handling precautions

Be careful not to bend the end bristle of the brush as it may cause the bad contact with the pressure roller.

2) Checking

Replace the discharge brush with a new one if toner is stick to it regardless of the number of output pages, as the performance of the brush may have been deteriorated.

5. TROUBLESHOOTING

When any of the PC boards or the HDD requires replacement, refer to "5.3 Replacement of PC Boards and HDD".

5.1 Diagnosis and Prescription for Each Error Code

5.1.1 Paper transport jam (paper exit section)

[E010] Jam not reaching the exit sensor

Open the jam access cover. Is there any paper on the transport path?

- ↓ YES → 1) Remove the paper.
↓ 2) Check if the intermediate guide is installed properly. (Ch.4.4 *c10)

NO

Is the paper clinging to the transfer belt entering under the receiving tray?

- ↓ YES → Remove the paper.

NO

Is the intermediate guide installed properly? (Ch.4.4 *c10)

- ↓ NO → Install the intermediate guide correctly.

YES

Is there any paper jammed in the fuser unit?

- ↓ YES → 1) Remove the paper.
↓ 2) Check if there is any abnormality on the paper transport path.

NO

Is the exit sensor working? (Perform the input check: 03-[FAX]OFF/[7]/[H])

- ↓ NO → 1) Check if the connector of the exit sensor is disconnected.
2) Check if the connector CN334 on the LGC board is disconnected.
3) Check if the connector pins are disconnected or the harnesses are open circuited.
4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
5) Replace the exit sensor.
6) Replace the LGC board.

YES

Is the registration clutch working? (Perform the output check: 03-108/158)

- ↓ NO → 1) Check if the connector of the registration clutch is disconnected.
2) Check if the connector CN339 on the LGC board is disconnected.
3) Check if the connector pins are disconnected or the harnesses are open circuited.
4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
5) Replace the registration clutch.
6) Replace the LGC board.

YES

Check the registration roller. Replace it if it is worn out.

[E020] Stop jam at the exit sensor

Open the jam access cover. Is there any paper on the transport path?

↓ YES → Remove the paper.

NO

Is the exit sensor working? (Perform the input check: 03-[FAX]OFF/[7]/[H])

↓ NO →

- 1) Check if the connector of the exit sensor is disconnected.
- 2) Check if the connector CN334 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the exit sensor.
- 6) Replace the LGC board.

↓ YES

Check the exit roller. Replace it if it is worn out.

5.1.2 Paper misfeeding

[E110] ADU misfeeding (paper not reaching the registration sensor)

Open the jam access cover. Is there any paper in front of the registration sensor?

↓ YES → Remove the paper.

NO

Is the registration sensor working? (Perform the input check:03-[FAX]ON/[9]/[E])

↓

- NO →
- 1) Check if the connector of the registration sensor is disconnected.
 - 2) Check if the connector CN338 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the registration sensor.
 - 6) Replace the LGC board.

YES

Is the ADU clutch working? (Perform the output check: 03-222)

↓

- NO →
- 1) Check if the connector of the ADU clutch is disconnected.
 - 2) Check if the connector CN340 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the ADU clutch.
 - 6) Replace the LGC board.

YES

Check the rollers in the ADU. Replace them if they are worn out.

[E120] Bypass misfeeding (paper not reaching the registration sensor)

Open the jam access cover. Is there any paper in front of the registration sensor?

↓ YES → Remove the paper.

NO

Is the registration sensor working? (Perform the input check: 03-[FAX]ON/[9]/[E])

↓ NO →

- 1) Check if the connector of the registration sensor is disconnected.
- 2) Check if the connector CN338 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected and the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the registration sensor.
- 6) Replace the LGC board.

YES

Are the bypass feed clutch and bypass feed sensor working?

(Perform the output check: 03-204 and the input check: 03-[FAX]ON/[9]/[D])

↓ NO →

- 1) Check if the connector of the bypass feed clutch is disconnected.
- 2) Check if the connector CN340 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the bypass feed clutch.
- 6) Replace the bypass feed sensor.
- 7) Replace the LGC board.

YES

Check the rollers in the ADU. Replace them if they are worn out.

[E130] Upper drawer misfeeding (paper not reaching the upper drawer feed sensor)

Open the jam access cover. Is there any paper in front of the upper drawer feed sensor?

↓ YES → Remove the paper.

NO

Is the upper drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[3]/[H])

↓ NO →

- 1) Check if the connector of the upper drawer feed sensor is disconnected.
- 2) Check if the connector CN338 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the upper drawer feed sensor.
- 6) Replace the LGC board.

YES

Is the upper drawer feed clutch working? (Perform the output check: 03-201)

↓ NO →

- 1) Check if the connector of the upper drawer feed clutch is disconnected.
- 2) Check if the connector CN341 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the upper drawer feed clutch.
- 6) Replace the LGC board.

YES

Check the upper drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

[E140] Lower drawer misfeeding (paper not reaching the lower drawer feed sensor)

Open the side cover. Is there any paper in front of the lower drawer feed sensor?

↓ YES → Remove the paper.

NO

Is the lower drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[3]/[G])

↓ NO →

- 1) Check if the connector of the lower drawer feed sensor is disconnected.
- 2) Check if the connector CN338 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the lower drawer feed sensor.
- 6) Replace the LGC board.

YES

Is the lower drawer feed clutch working? (Perform the output check: 03-202)

↓ NO →

- 1) Check if the connector of the lower drawer feed clutch is disconnected.
- 2) Check if the connector CN341 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the lower drawer feed clutch.
- 6) Replace the LGC board.

YES

Check the lower drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

[E150] PFP upper drawer misfeeding (paper not reaching the PFP upper drawer feed sensor)

Open the PFP side cover. Is there any paper in front of the PFP upper drawer feed sensor?

↓ YES → Remove the paper.

NO

Is the PFP upper drawer feed sensor working?

(Perform the input check: 03-[FAX]OFF/[2]/[D])

- ↓
- NO →
- 1) Check if the connector of the PFP upper drawer feed sensor is disconnected.
 - 2) Check if either of the connectors CN241 or CN243 on the PFP board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
 - 6) Replace the PFP upper drawer feed sensor.
 - 7) Replace the PFP board.
 - 8) Replace the LGC board.

↓

YES

Is the PFP upper drawer feed clutch working? (Perform the output check: 03-226)

- ↓
- NO →
- 1) Check if the connector of the PFP upper drawer feed clutch is disconnected.
 - 2) Check if any of the connectors CN241, CN242 and CN244 on the PFP board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
 - 6) Replace the PFP upper drawer feed clutch.
 - 7) Replace the PFP board.
 - 8) Replace the LGC board.

↓

YES

Check the PFP upper drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

[E160] PFP lower drawer misfeeding (paper not reaching the PFP lower drawer feed sensor)

Open the PFP side cover. Is there any paper in front of the PFP lower drawer feed sensor?

↓ YES → Remove the paper.

NO

Is the PFP lower drawer feed sensor working?

(Perform the input check: 03-[FAX]OFF/[4]/[D])

↓ NO →

- 1) Check if the connector of the PFP lower drawer feed sensor is disconnected.
- 2) Check if either of the connectors CN241 or CN243 on the PFP board is disconnected.
- 3) Check if the connector CN344 on the LGC board is disconnected.
- 4) Check if the connector pins are disconnected or the harnesses are open circuited.
- 5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
- 6) Replace the PFP lower drawer feed sensor.
- 7) Replace the PFP board.
- 8) Replace the LGC board.

↓ YES

Is the PFP lower drawer feed clutch working? (Perform the output check: 03-228)

↓ NO →

- 1) Check if the connector of the PFP lower drawer feed clutch is disconnected.
- 2) Check if any of the connectors CN241, CN242 and CN244 on the PFP board is disconnected.
- 3) Check if the connector CN344 on the LGC board is disconnected.
- 4) Check if the connector pins are disconnected or the harnesses are open circuited.
- 5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
- 6) Replace the PFP lower drawer feed clutch.
- 7) Replace the PFP board.
- 8) Replace the LGC board.

↓ YES

Check the PFP lower drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

[E190] LCF misfeeding (paper not reaching the LCF feed sensor)

Open the LCF side cover. Is there any paper in front of the LCF feed sensor?

↓ YES → Remove the paper.

NO

Is the LCF feed sensor working? (Perform the input check: 03-[FAX]OFF/[5]/[G])

- NO →
- 1) Check if the connector of the LCF feed sensor is disconnected.
 - 2) Check if either of the connectors CN100 or CN104 on the LCF board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
 - 6) Replace the LCF feed sensor.
 - 7) Replace the LCF board.
 - 8) Replace the LGC board.

↓
YES

Is the LCF feed clutch working? (Perform the output check: 03-209)

- NO →
- 1) Check if the connector of the LCF feed clutch is disconnected.
 - 2) Check if any of the connectors CN100, CN101 and CN103 on the LCF board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
 - 6) Replace the LCF feed clutch.
 - 7) Replace the LCF board.
 - 8) Replace the LGC board.

↓
YES

Check the LCF feed roller, separation roller and pickup roller. Replace them if they are worn out.

5.1.3 Paper transport jam

[E200] Upper drawer transport jam (not reaching the registration sensor)

[E210] Lower drawer transport jam (not reaching the registration sensor)

[E300] PFP upper drawer transport jam (not reaching the registration sensor)

[E330] PFP lower drawer transport jam (not reaching the registration sensor)

[E3C0] LCF transport jam (not reaching the registration sensor)

Open the jam access cover. Is there paper in front of the registration sensor?

↓ YES → Remove the paper.

NO

Is the registration sensor working? (Perform the input check: 03-[FAX]ON/[9]/[E])

↓ NO →

- 1) Check if the connector of the registration sensor is disconnected.
- 2) Check if the connector CN338 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the registration sensor.
- 6) Replace the LGC board.

↓ YES

Are the upper transport clutches (high/low speed) working?

(Perform the output check: 03-439, 440)

↓ NO →

- 1) Check if the connectors of the upper transport clutches (high/low speed) are disconnected.
- 2) Check if the connector CN339 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the upper transport clutches (high/low speed).
- 6) Replace the LGC board.

↓ YES

- 1) Check the condition of the feed roller, separation roller and pickup roller of each paper source, and replace them if they are worn out.
- 2) Check the transport roller. Replace it if it is worn out.

[E220] Lower drawer transport jam (not reaching the upper drawer feed sensor)

[E310] PFP upper drawer transport jam (not reaching the upper drawer feed sensor)

[E340] PFP lower drawer transport jam (not reaching the upper drawer feed sensor)

[E3D0] LCF transport jam (not reaching the upper drawer feed sensor)

Open the jam access cover. Is there paper in front of the upper drawer feed sensor?

↓ YES → Remove the paper.

NO

Is the upper drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[3]/[H])

↓ NO →

- 1) Check if the connector of the upper drawer feed sensor is disconnected.
- 2) Check if the connector CN338 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the upper drawer feed sensor.
- 6) Replace the LGC board.

↓ YES

Are the lower transport clutches (high/low speed) working?

(Perform the output check: 03-203, 205)

↓ NO →

- 1) Check if the connectors of the lower transport clutches (high/low speed) are disconnected.
- 2) Check if the connector CN341 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the lower transport clutches (high/low speed).
- 6) Replace the LGC board.

↓ YES

- 1) Check the condition of the feed roller, separation roller and pickup roller of each paper source, and replace them if they are worn out.
- 2) Check the transport roller. Replace it if it is worn out.

[E320] PFP upper drawer transport jam (not reaching the lower drawer feed sensor)

[E350] PFP lower drawer transport jam (not reaching the lower drawer feed sensor)

[E3E0] LCF transport jam (not reaching the lower drawer feed sensor)

Open the side cover. Is there paper in front of the lower drawer feed sensor?

↓ YES → Remove the paper.

NO

Is the lower drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[3]/[G])

↓ NO →

- 1) Check if the connector of the lower drawer feed sensor is disconnected.
- 2) Check if the connector CN338 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the lower drawer feed sensor.
- 6) Replace the LGC board.

↓ YES

Are the lower transport clutches working? (Perform the output check: 03-203, 205)

↓ NO →

- 1) Check if the connectors of the lower transport clutches (high/low speed) are disconnected.
- 2) Check if the connector CN341 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the lower transport clutches (high/low speed).
- 6) Replace the LGC board.

↓ YES

When the paper fed from the PFP:

Is the PFP transport clutch working? (Perform the output check: 03-225)

↓ NO →

- 1) Check if the connector of the PFP transport clutch is disconnected.
- 2) Check if any of the connectors CN241, CN242 and CN244 on the PFP board is disconnected.
- 3) Check if the connector CN344 on the LGC board is disconnected.
- 4) Check if the connector pins are disconnected or the harnesses are open circuited.
- 5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
- 6) Replace the PFP transport clutch.
- 7) Replace the PFP board.
- 8) Replace the LGC board.

↓ YES

- 1) Check the condition of the feed roller, separation roller and pickup roller of each paper source, and replace them if they are worn out.
- 2) Check the transport roller. Replace it if it is worn out.

[E360] PFP lower drawer transport jam (not reaching the PFP upper drawer feed sensor)

Open the PFP side cover. Is there any paper in front of the PFP upper drawer feed sensor?

↓ YES → Remove the paper.

NO

Is the PFP upper feed sensor working? (Perform the input check: 03-[FAX]OFF/[2]/[D])

- ↓
- NO →
- 1) Check if the connector of the PFP upper drawer feed sensor is disconnected.
 - 2) Check if either of the connectors CN241 or CN243 on the PFP board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
 - 6) Replace the PFP upper drawer feed sensor.
 - 7) Replace the PFP board.
 - 8) Replace the LGC board.

↓

YES

Is the PFP transport clutch working? (Perform the output check: 03-225)

- ↓
- NO →
- 1) Check if the connector of the PFP transport clutch is disconnected.
 - 2) Check if any of the connectors CN241, CN242 and CN244 on the PFP board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
 - 6) Replace the PFP transport clutch.
 - 7) Replace the PFP board.
 - 8) Replace the LGC board.

↓

YES

- 1) Check the condition of the feed roller, separation roller and pickup roller of each paper source, and replace them if they are worn out.
- 2) Check the PFP transport roller. Replace it if it is worn out.

[E510] ADU transport stop jam

Open the ADU. Is there any paper in front of the ADU entrance sensor?

↓ YES → Remove the paper.

NO

Is the ADU entrance sensor working? (Perform the input check: 03-[FAX]OFF/[8]/[H])

- ↓
- NO →
- 1) Check if the connector of the ADU entrance sensor is disconnected.
 - 2) Check if either of the connectors CN211 or CN214 on the ADU board is disconnected.
 - 3) Check if the connector CN340 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the ADU board and LGC board are short circuited or open circuited.
 - 6) Replace the ADU entrance sensor.
 - 7) Replace the ADU board.
 - 8) Replace the LGC board.

↓

YES

Is the exit motor (rotating in reverse) working? (Perform the output check: 03-121/171)

- ↓
- NO →
- 1) Check if the connector of the exit motor is disconnected.
 - 2) Check if the connectors CN437 and CN434 on the DRV board is disconnected.
 - 3) Check if the connector CN331 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the DRV board and LGC board are short circuited or open circuited.
 - 6) Replace the exit motor.
 - 7) Replace the DRV board.
 - 8) Replace the LGC board.

↓

YES

Is the ADU motor working? (Perform the output check: 03-110/160)

- ↓
- NO →
- 1) Check if the connector of the ADU motor is disconnected.
 - 2) Check if any of the connectors CN211, CN212 and CN215 on the ADU board is disconnected.
 - 3) Check if the connector CN340 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the ADU board and LGC board are short circuited or open circuited.
 - 6) Replace the ADU motor.
 - 7) Replace the ADU board.
 - 8) Replace the LGC board.

↓

YES

Check the rollers in the ADU and the exit roller of the equipment. Replace them if they are worn out.

[E520] Stop jam in the ADU

Open the ADU. Is there any paper in front of the ADU exit sensor?

↓ YES → Remove the paper.

NO

Is the ADU exit sensor working? (Perform the input check: 03-[FAX]OFF/[8]/[G])

- ↓
- NO →
- 1) Check if the connector of the ADU exit sensor is disconnected.
 - 2) Check if either of the connectors CN211 or CN213 on the ADU board is disconnected.
 - 3) Check if the connector CN340 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the ADU board and LGC board are short circuited or open circuited.
 - 6) Replace the ADU exit sensor.
 - 7) Replace the ADU board.
 - 8) Replace the LGC board.

↓

YES

Is the ADU clutch working? (Perform the output check: 03-222)

- ↓
- NO →
- 1) Check if the connector of the ADU clutch is disconnected.
 - 2) Check if the connector CN340 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the ADU clutch.
 - 6) Replace the LGC board.

↓

YES

Check the rollers in the ADU. Replace them if they are worn out.

[EB50] Paper remaining on the transport path due to multiple feeding

When the paper is fed from any of the upper drawer, bypass feed unit or ADU:

Open the jam access cover. Is there any paper in front of the registration sensor?

↓ YES → Remove the paper.

NO

When the paper is fed from the upper drawer:

Is the upper drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[3]/[H])

↓ NO →

- 1) Check if the connector of the upper drawer feed sensor is disconnected.
- 2) Check if the connector CN338 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the upper drawer feed sensor.
- 6) Replace the LGC board.

↓ YES

When the paper is fed from the bypass feed unit:

Is the bypass feed sensor working? (Perform the input check: 03-[FAX]ON/[9]/[D])

↓ NO →

- 1) Check if the connector of the bypass feed sensor is disconnected.
- 2) Check if the connector CN340 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the bypass feed sensor.
- 6) Replace the LGC board.

↓ YES

When the paper is fed from the ADU:

Is the ADU exit sensor working? (Perform the input check: 03-[FAX]OFF/[8]/[G])

↓ NO →

- 1) Check if the connector of the ADU exit sensor is disconnected.
- 2) Check if either of the connectors CN211 or CN213 on the ADU board is disconnected.
- 3) Check if the connector CN340 on the LGC board is disconnected.
- 4) Check if the connector pins are disconnected or the harnesses are open circuited.
- 5) Check if the conductor patterns on the ADU board and LGC board are short circuited or open circuited.
- 6) Replace the ADU exit sensor.
- 7) Replace the ADU board.
- 8) Replace the LGC board.

↓ YES

Is the registration sensor working? (Perform the input check: 03-[FAX]ON/[9]/[E])

↓ NO →

- 1) Check if the connector of the registration sensor is disconnected.
- 2) Check if the connector CN338 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the registration sensor.
- 6) Replace the LGC board.

↓ YES

Check the rollers. Replace them if they are worn out.

When the paper is fed from any of the lower drawer, PFP or LCF:

Open the jam access cover. Is there any paper in front of the upper drawer feed sensor?

↓ YES → Remove the paper.

NO

Are the upper/lower drawer feed sensors working?

(Perform the input check: 03-[FAX]ON/[3]/[H],/[3]/[G])

- ↓
- NO →
- 1) Check if the connectors of the upper/lower drawer feed sensors are disconnected.
 - 2) Check if the connector CN338 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the upper/lower drawer feed sensors.
 - 6) Replace the LGC board.

↓

YES

Check the rollers. Replace them if they are worn out.

[EB60] Paper remaining on the transport path due to multiple feeding

Open the jam access cover. Is there any paper in front of the registration sensor?

↓ YES → Remove the paper.

NO

Is the registration sensor working? (Perform the input check: 03-[FAX]ON/[9]/[E])

- ↓
- NO →
- 1) Check if the connector of the registration sensor is disconnected.
 - 2) Check if the connector CN338 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the registration sensor.
 - 6) Replace the LGC board.

↓

YES

Check the rollers. Replace them if they are worn out.

5.1.4 Other paper jam

[E030] Power-ON jam

Open the cover of the unit/area whose picture is flashing on the control panel.

Is there any paper on the transport path? (Refer to the following table)

↓ YES → Remove the paper.

NO

Is the sensor in the jamming area working?

(Perform the input check: Refer to the following table.)

↓ NO →

- 1) Check if the connector of the sensor is disconnected.
- 2) Check if any of the connectors on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the sensor.
- 6) Replace the LGC board.

↓ NO

Replace the LGC board.

Relation between the jamming area and the corresponding sensors/covers.

(If a jam is occurring in the ADU, LCF or PFP, check the board in each unit.)

| Jamming area | Cover | Sensor | Test Mode/Input check |
|--------------------------|------------------|--------------------------------|-----------------------|
| Registration area | Jam access cover | Registration sensor | 03-[FAX]ON/[9]/[E] |
| | | Upper drawer feed sensor | 03-[FAX]ON/[3]/[H] |
| Exit area | Fuser cover | Exit sensor | 03-[FAX]OFF/[7]/[H] |
| ADU | ADU | ADU entrance sensor | 03-[FAX]OFF/[8]/[H] |
| | | ADU exit sensor | 03-[FAX]OFF/[8]/[G] |
| Feeding area (equipment) | Side cover | Lower drawer feed sensor | 03-[FAX]ON/[3]/[G] |
| Bypass unit | Bypass unit | Bypass feed sensor | 03-[FAX]ON/[9]/[D] |
| LCF | LCF side cover | LCF feed sensor | 03-[FAX]OFF/[5]/[G] |
| PFP | PFP side cover | PFP upper drawer feed sensor | 03-[FAX]OFF/[2]/[D] |
| | | PFP lower drawer feed sensor | 03-[FAX]OFF/[4]/[D] |
| Bridge unit | Bridge unit | Bridge unit transport sensor-1 | 03-[FAX]ON/[0]/[C] |
| | | Bridge unit transport sensor-2 | 03-[FAX]ON/[0]/[A] |

[E061] Incorrect paper size setting for upper drawer

[E062] Incorrect paper size setting for lower drawer

[E063] Incorrect paper size setting for PFP upper drawer

[E064] Incorrect paper size setting for PFP lower drawer

[E065] Incorrect paper size setting for bypass tray

If any paper remains in the equipment or drawer, remove it. Match the paper size of the drawer setting and the one in the drawer.

* Paper size detection is performed at the first sheet of paper when the drawer is opened or closed, or when the power of the equipment is turned ON.

[E090] Image data delay jam

- 1) Remove the paper remained in front of the registration sensor.
- 2) Check if the error is cleared by turning the power OFF and then back ON.
- 3) Check if the connectors connecting the SYS board, SLG board and PLG board are disconnected.
- 4) Check if the connectors of the HDD are disconnected.
- 5) Check if the harnesses connecting the SYS board, SLG board and PLG board are open-circuited.
- 6) Replace the HDD, SYS board, SLG board and PLG board.

[E550] Paper remaining on the transport path

Open the cover of the unit/area whose picture is flashing on the control panel.

Is there any paper on the transport path?

↓ YES → Remove the paper.

NO

Is the sensor in the jamming area working?

(Perform the input check: Refer to the following table)

- ↓
- NO →
- 1) Check if the connector of the sensor is disconnected.
 - 2) Check if any of the connectors on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the sensor.
 - 6) Replace the LGC board.

↓

YES

Replace the LGC board.

Relation between the jamming area and the corresponding sensors/covers
(If a jam is occurring in the ADU, LCF or PFP, check the board in each unit.)

| Jamming area | Cover | Sensor | Test Mode/Input check |
|--------------------------|------------------|--------------------------------|-----------------------|
| Registration area | Jam access cover | Registration sensor | 03-[FAX]ON/[9]/[E] |
| | | Upper drawer feed sensor | 03-[FAX]ON/[3]/[H] |
| Exit area | Fuser cover | Exit sensor | 03-[FAX]OFF/[7]/[H] |
| ADU | ADU | ADU entrance sensor | 03-[FAX]OFF/[8]/[H] |
| | | ADU exit sensor | 03-[FAX]OFF/[8]/[G] |
| Bypass unit | Bypass unit | Bypass feed sensor | 03-[FAX]ON/[9]/[D] |
| Feeding area (equipment) | Side cover | Lower drawer feed sensor | 03-[FAX]ON/[3]/[G] |
| LCF | LCF side cover | LCF feed sensor | 03-[FAX]OFF/[5]/[G] |
| PFP | PFP side cover | PFP upper drawer feed sensor | 03-[FAX]OFF/[2]/[D] |
| | | PFP lower drawer feed sensor | 03-[FAX]OFF/[4]/[D] |
| Bridge unit | Bridge unit | Bridge unit transport sensor-1 | 03-[FAX]ON/[0]/[C] |
| | | Bridge unit transport sensor-2 | 03-[FAX]ON/[0]/[A] |
| Finisher | Finisher door | Sensors in the finisher | - |

5.1.5 Cover open jam

[E400] Jam access cover open

Is the jam access cover open?

↓ YES → Remove paper if there is any, then shut the cover.

NO

Is the voltage of 24V being supplied from the power supply unit?

(Perform the input check: 03-[FAX] ON/[1]/[H])

↓ NO →

- 1) Check if the connector for 24V power supply is disconnected.
- 2) Check if the connector CN335 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the LGC board.

↓ YES

Replace the LGC board.

[E410] Front cover open jam

Is the front cover open?

↓ YES → Shut the cover.

NO

Is the voltage of 24V being supplied from the power supply unit?

(Perform the input check: 03-[FAX] ON/[1]/[H])

↓ NO →

- 1) Check if the connector for 24V power supply is disconnected.
- 2) Check if the connector CN335 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the LGC board.

↓ YES

Is the front cover opening/closing switch working?

(Perform the input check: 03-[FAX] OFF/[7]/[F])

↓ NO →

- 1) Check if the connector of the front cover opening/closing switch is disconnected.
- 2) Check if the connector CN338 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the front cover opening/closing switch.
- 6) Replace the LGC board.

↓ YES

Replace the LGC board.

[E420] PFP side cover open jamIs the PFP side cover open?

↓ YES → Remove the paper if there is any, then shut the cover.

NO

Is the PFP side cover opening/closing switch working?(Perform the input check: 03-[FAX]OFF/[2]/[F])

↓

NO →

- 1) Check if the connector of the PFP side cover opening/closing switch is disconnected.
- 2) Check if either of the connectors CN241 or CN243 on the PFP board is disconnected.
- 3) Check if the connector CN344 on the LGC board is disconnected.
- 4) Check if the connector pins are disconnected or the harnesses are open circuited.
- 5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
- 6) Replace the PFP side cover opening/closing switch.
- 7) Replace the PFP board.
- 8) Replace the LGC board.

YES

- 1) Replace the PFP board.
- 2) Replace the LGC board.

[E430] ADU open jamIs the ADU open?

↓ YES → Remove the paper if there is any, then shut the ADU.

NO

Is the ADU opening/closing switch working?(Perform the input check: 03-[FAX]OFF/[8]/[F])

↓

NO →

- 1) Check if the connector of the ADU opening/closing switch is disconnected.
- 2) Check if either of the connectors CN211 or CN217 on the ADU board is disconnected.
- 3) Check if the connector CN340 on the LGC board is disconnected.
- 4) Check if the connector pins are disconnected or the harnesses are open circuited.
- 5) Check if the conductor patterns on the ADU board and LGC board are short circuited or open circuited.
- 6) Replace the ADU opening/closing switch.
- 7) Replace the ADU board.
- 8) Replace the LGC board.

YES

- 1) Replace the ADU board.
- 2) Replace the LGC board.

[E440] Side cover open jam

Is the side cover open?

↓ YES → Remove the paper if there is any, then shut the cover.

NO

Is the side door switch working?

(Perform the input check: 03-[FAX]OFF/[7]/[E])

↓ NO →

- 1) Check if the connector of the side door switch is disconnected.
- 2) Check if the connector CN338 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the side door switch.
- 6) Replace the LGC board.

↓ YES

Replace the LGC board.

[E450] LCF side cover open jam

Is the LCF side cover open?

↓ YES → Remove the paper if there is any, then shut the cover.

NO

Is the LCF side cover opening/closing switch working?

(Perform the input check: 03-[FAX]OFF/[5]/[D])

↓ NO →

- 1) Check if the connector of the LCF side cover opening/closing switch is disconnected.
- 2) Check if either of the connectors CN100 or CN106 on the LCF board is disconnected.
- 3) Check if the connector CN344 on the LGC board is disconnected.
- 4) Check if the connector pins are disconnected or the harnesses are open circuited.
- 5) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
- 6) Replace the LCF side cover opening/closing switch.
- 7) Replace the LCF board.
- 8) Replace the LGC board.

↓ YES

- 1) Replace the LCF board.
- 2) Replace the LGC board.

[E480] Bridge unit open jam

Is the Bridge unit open?

↓ YES → Remove the paper if there is any, then close the unit.

NO

Is the bridge unit cover opening/closing detection switch working?

(Perform the input check: 03-[FAX]ON/[0]/[B])

↓ NO →

- 1) Check if the connector of the bridge unit cover opening/closing detection switch is disconnected.
- 2) Check if the connector CN353 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 5) Replace the bridge unit cover opening/closing detection switch.
- 6) Replace the LGC board.

YES

Replace the LGC board.

5.1.6 RADF jam

[E712] Jam not reaching the original registration sensor

Are the pickup roller, feed roller and separation roller stained or worn out?

↓ YES → Clean the rollers or replace them.

NO

Is the original excessively curled or folded?

↓ YES → Flatten and set it again.

NO

Is the original registration sensor working?

(Perform the input check: 03-[FAX]ON/[7]/[H])

↓ NO →

- 1) Check if the connector of the original registration sensor is disconnected.
- 2) Check if the connector CN74 on the RADF board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the RADF board is short circuited or open circuited.
- 5) Replace the original registration sensor.
- 6) Replace the RADF board.

↓ YES

Replace the RADF board.

[E713] Cover open jam in the read ready status

Are the RADF jam access cover or front cover opened in read ready status?

↓ YES → Close the cover

NO

Is the original excessively curled or folded?

↓ YES → Flatten and set it again.

NO

Is the RADF jam access cover sensor working?

(Perform the input check: 03-[FAX]ON/[7]/[C])

↓ NO →

- 1) Check if the connector of the RADF jam access cover sensor is disconnected.
- 2) Check if the connector CN75 on the RADF board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the RADF board is short circuited or open circuited.
- 5) Replace the RADF jam access cover sensor.
- 6) Replace the RADF board.

↓ YES

Replace the RADF board.

[E714] Feed signal reception jam

Is the empty sensor working? (Perform the input check: 03-[FAX]ON/[7]/[B])

↓ YES → Clean the rollers or replace them.

NO

Is the original excessively curled or folded?

↓ YES → Flatten and set it again.

NO

Are the original length sensor and registration sensor working?

(Perform the input check: 03-[FAX]ON/[8]/[E], [7]/[H])

- NO →
- 1) Check if the lever of empty sensor is working normally.
 - 2) Check if the connector of the empty sensor is disconnected.
 - 3) Check if the connector CN75 on the RADF board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor pattern on the RADF board is short circuited or open circuited.
 - 6) Replace the empty sensor.
 - 7) Replace the RADF board.

↓
YES

Replace the RADF board.

[E721] Jam not reaching the read sensor

Are the registration roller and read roller stained?

↓ YES → Clean the rollers.

NO

Is the read sensor working? (Perform the input check: 03-[FAX]ON/[7]/[G])

- NO →
- 1) Check if the connector of the read sensor are disconnected.
 - 2) Check if the connector CN75 on the RADF board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor pattern on the RADF board is short circuited or open circuited.
 - 5) Replace the read sensor.
 - 6) Replace the RADF board.

↓
YES

Replace the RADF board.

[E722] Jam not reaching the exit sensor (during scanning)

[E723] Jam not reaching the reverse sensor (during scanning)

Is the read roller stained?

↓ YES → Clean the roller.

NO

Are the exit sensor and reverse sensor working?

(Perform the input check: 03-[FAX]ON/[7]/[E], [7]/[F])

↓ NO →

- 1) Check if the connectors of the exit sensor and reverse sensor are disconnected.
- 2) Check if the connector CN75 on the RADF board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the RADF board is short circuited or open circuited.
- 5) Replace the exit sensor and reverse sensor.
- 6) Replace the RADF board.

YES

Replace the RADF board.

[E724] Stop jam at the registration sensor

Is the registration roller stained?

↓ YES → Clean the roller.

NO

Is the registration sensor working? (Perform the input check: 03-[FAX]ON/[7]/[H])

↓ NO →

- 1) Check if the connector of the registration sensor is disconnected.
- 2) Check if the connector CN74 on the RADF board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the RADF board is short circuited or open circuited.
- 5) Replace the registration sensor.
- 6) Replace the RADF board.

YES

Replace the RADF board.

[E725] Stop jam at the read sensor

Is the read roller stained?

↓ YES → Clean the roller.

NO

Is the read sensor working? (Perform the input check: 03-[FAX]ON/[7]/[G])

- ↓
- NO →
- 1) Check if the connector of the read sensor is disconnected.
 - 2) Check if the connector CN75 on the RADF board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor pattern on the RADF board is short circuited or open circuited.
 - 5) Replace the read sensor.
 - 6) Replace the RADF board.

↓

YES

Replace the RADF board.

[E731] Stop jam at the exit sensor

Is the exit roller stained?

↓ YES → Clean the roller.

NO

Is the exit sensor working? (Perform the input check: 03-[FAX]ON/[7]/[E])

- ↓
- NO →
- 1) Check if the connector of the exit sensor is disconnected.
 - 2) Check if the connector CN75 on the RADF board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor pattern on the RADF board is short circuited or open circuited.
 - 5) Replace the exit sensor.
 - 6) Replace the RADF board.

↓

YES

Replace the RADF board.

[E860] RADF jam access cover open

Is the RADF jam access cover opened?

↓ YES → Remove the original, if any, and close the jam access cover.

NO

Is the RADF jam access cover switch working? (Perform the input check: 03-[FAX]ON/[7]/[C])

- ↓
- NO →
- 1) Check if the connector of the RADF jam access cover switch is disconnected.
 - 2) Check if the connector CN72 on the RADF board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor pattern on the RADF board is short circuited or open circuited.
 - 5) Replace the RADF jam access cover switch.
 - 6) Replace the RADF board.

↓

YES

Replace the RADF board.

[E870] RADF open jam

Is the RADF opened?

↓ YES → Remove the original, if any, and close the RADF.

NO

Is the RADF opening/closing sensor adjusted within the specified range?

↓ NO → Adjust the RADF opening/closing sensor.

YES

Is the RADF opening/closing sensor working? (Perform the input check: 03-[FAX]ON/[7]/[D])

↓ NO →

- 1) Check if the connector of the RADF opening/closing sensor is disconnected.
- 2) Check if the connector CN75 on the RADF board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Check if the conductor pattern on the RADF board is short circuited or open circuited.
- 5) Replace the RADF opening/closing sensor.
- 6) Replace the RADF board.

YES

Replace the RADF board.

5.1.7 Finisher jam

[1] Jam in bridge unit

[E910] Paper not reaching the bridge unit transport sensor-1

[E920] Paper stopping at the bridge unit transport sensor-1

[E930] Paper not reaching the bridge unit transport sensor-2

[E940] Paper stopping at the bridge unit transport sensor-2

Is there any paper remaining inside the bridge unit?

↓ YES → Remove the paper.

NO

Are the bridge unit transport sensors-1 and -2 working?

(Perform the input check: 03-[FAX]ON/[0]/[C], /[0]/[A])

↓ NO →

- 1) Check if the connectors of the bridge unit transport sensors-1 and -2 are disconnected.
- 2) Check if the connector J510 of the bridge unit is disconnected.
- 3) Check if the connector CN353 on the LGC board is disconnected.
- 4) Check if the connector pins are disconnected or the harnesses are open circuited.
- 5) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 6) Replace the bridge unit transport sensors-1 and -2.
- 7) Replace the LGC board.

↓ YES

Is the bridge unit gate solenoid working? (Perform the output check: 03-232)

↓ NO →

- 1) Check if the connector J510 of the bridge unit is disconnected.
- 2) Check if the connector CN353 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Replace the bridge unit gate solenoid.
- 5) Replace the LGC board.

↓ YES

Does the transport roller of the bridge unit work when the main motor is rotated?

(Perform the output check: 03-101/151)

↓ NO → Check the drive system of the equipment and bridge unit.

YES

Check if the rollers in the bridge unit are worn out.

[2] Paper jam in finisher section

[EA10] Paper transport delay jam

MJ-1022

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is the connector J10 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and inlet sensor (S2) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the inlet sensor working normally? (Check the movement of the actuator.)

| NO → 1) Connect the connector of the inlet sensor securely.
| 2) Attach the actuator securely if its shaft is out of place.
↓ 3) Replace the inlet sensor.

YES

Replace the finisher controller PC board.

MJ-1023/1024

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is the connector J708 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and inlet sensor (PI33) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the inlet sensor working properly? (Check the movement of the actuator.)

| NO → 1) Connect the connector of the inlet sensor securely.
| 2) Attach the actuator securely if its shaft is out of place.
↓ 3) Replace the inlet sensor.

YES

Replace the finisher controller PC board.

[EA20] Paper transport stop jam

MJ-1022

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is the connector J10 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and inlet sensor (S2) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the inlet sensor working properly? (Check the movement of the actuator.)

↓ NO → 1) Connect the connector of the inlet sensor securely.
2) Attach the actuator securely if its shaft is out of place.
3) Replace the inlet sensor.

YES

Replace the finisher controller PC board.

MJ-1023/1024

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is any of the connectors (J707, J708 and J722B) on the finisher controller PC board disconnected?

Is the harness between the finisher controller PC board and each sensor (the inlet sensor [PI33], the transport path sensor [PI34], the processing tray sensor [PI38]) open circuited?

↓ YES → Connect the connectors securely. Replace the harnesses.

NO

Is each of the sensors (the inlet sensor, the transport path sensor and the processing tray sensor) working properly? (Check the movement of the actuator.)

↓ NO → 1) Connect the connectors of the sensors securely.
2) Attach the actuators securely if their shafts are out of place.
3) Replace the sensors.

YES

Replace the finisher controller PC board.

[EA30] Power-ON jam

MJ-1022

Is there any paper remaining on the transport path in the finisher?

↓ YES → Remove the paper.

NO

Is the connector J10 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and inlet sensor (S2) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the inlet sensor working properly? (Check the movement of the actuator.)

| NO → 1) Connect the connector of the inlet sensor securely.
| 2) Attach the actuator securely if its shaft is out of place.
↓ 3) Replace the inlet sensor.

YES

Replace the finisher controller PC board.

MJ-1023/1024

Is there any paper remaining on the transport path in the finisher?

↓ YES → Remove the paper.

NO

Is any of the connectors J707, J708 and J722B on the finisher controller PC board disconnected?

Is the harness between the finisher controller PC board and each sensor (the inlet sensor [PI33], the transport path sensor [PI34], the processing tray sensor [PI38], open circuited?

↓ YES → Connect the connectors securely. Replace the harnesses.

NO

Is each of the sensors (the inlet sensor, the transport path sensor and the processing tray sensor) working properly? (Check the movement of the actuator.)

| NO → 1) Connect the connectors of the sensors securely.
| 2) Attach the actuators securely if their shafts are out of place.
↓ 3) Replace the sensors.

YES

Replace the finisher controller PC board.

[EA40] Door open jam

MJ-1022

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is the finisher connected with the equipment?

↓ NO → Connect the finisher with the equipment.

YES

Is the connector J11 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and joint sensor (S4) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the joint sensor working properly?

↓ NO → 1) Connect the connector of the joint sensor securely.
2) Replace the joint sensor.

YES

Replace the finisher controller PC board.

MJ-1023/1024

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is either of the covers upper or front of the finisher closed?

↓ NO → Close the door.

YES

Is any connectors J707 and J708 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and upper/front cover opening sensors (PI31 and PI32) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the upper/front cover opening sensor working properly?

↓ NO → 1) Connect the connector of the upper/front cover opening sensor securely.
2) Replace the upper/front cover opening sensor.

YES

Is the connector J719 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and front cover switch (MS31) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the front cover switch working properly?

↓ NO → 1) Connect the connector of the front cover switch securely.
2) Replace the front cover switch.

YES

Is the connector J5 on the punch controller PC board disconnected?

Is the harness connecting the punch controller PC board and upper door switch (MSW61) open circuited?

Is the harness connecting the punch controller PC board and front door switch (MSW62) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

↓

NO

Are the upper and front door switches working properly?

|

NO → 1) Connect the connectors of the upper and front door switches securely.
2) Replace the upper/front door switches.

↓

YES

Replace the finisher controller PC board.

[EA50] Stapling jam

MJ-1022

Is there any paper remaining on the transport path in the finisher or equipment or on the stapling tray?

↓ YES → Remove the paper.

NO

Is the jam cleared by taking off the staple cartridge from the finisher and removing the staple sheet slid from the staple case?

↓ YES → End.

NO

Is the connector J8 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and stapling home position sensor (S17) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the stapling home position sensor working properly?

| NO → 1) Connect the connector of the stapling home position sensor securely.
↓ 2) Replace the stapling home position sensor.

YES

Replace the finisher controller PC board.

MJ-1023/1024

Is there any paper remaining on the transport path in the finisher or equipment or on the stapling tray?

↓ YES → Remove the paper.

NO

Is the jam cleared by taking off the staple cartridge from the finisher and removing the staple sheet slid from the staple case?

↓ YES → End.

NO

Is the connector J721B on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and staple home position sensor (PI40) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the staple home position sensor working properly?

| NO → 1) Connect the connector of the staple home position sensor securely.
↓ 2) Replace the staple home position sensor.

YES

Replace the finisher controller PC board.

[EA60] Early arrival jam

MJ-1022

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is the connector J10 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and inlet sensor (S2) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the inlet sensor working properly? (Check the movement of the actuator.)

↓ NO → 1) Connect the connector of the inlet sensor securely.
2) Attach the actuator securely if its shaft is out of place.
3) Replace the inlet sensor.

↓ YES

Replace the finisher controller PC board.

MJ-1023/1024

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is the connector J708 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and inlet sensor (PI33) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the inlet sensor working properly? (Check the movement of the actuator.)

↓ NO → 1) Connect the connector of the inlet sensor securely.
2) Attach the actuator securely if its shaft is out of place.
3) Replace the inlet sensor.

↓ YES

Replace the finisher controller PC board.

[EA70] Stack delivery jam

MJ-1022

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is the connector J9 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and stack delivery lever home position sensor (S8) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the stack delivery lever home position sensor working properly?

↓ NO → 1) Connect the connector of the stack delivery lever home position sensor securely.
2) Replace the stack delivery lever home position sensor.

↓ YES

Replace the finisher controller PC board.

[EAF0] Stack return jam

MJ-1022

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is the connector J10 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and returning roller home position sensor (S3) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the returning roller home position sensor working properly?

↓ NO → 1) Connect the connector of the returning roller home position sensor securely.

↓ 2) Replace the returning roller home position sensor.

YES

Replace the finisher controller PC board.

[3] Paper jam in saddle stitcher section

[EA80] Stapling jam

MJ-1024

Is there any paper remaining on the transport path or the stapling tray in the finisher, saddle stitcher section or equipment?

↓ YES → Remove the paper.

NO

Is the jam cleared by taking off the staple cartridge from the finisher and removing the staples stuck in the stapling unit?

↓ YES → End.

NO

Is the connector J8 on the saddle stitcher controller PC board disconnected?

Is the harness connecting the saddle stitcher controller PC board and stitcher home position switch (rear: SW5, front: SW7) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Are the stitcher home position switches working properly?

| NO → 1) Connect the connectors of the stitcher home position switches securely.
↓ 2) Replace the stitcher home position switches.

YES

Replace the saddle stitcher controller PC board.

[EA90] Door open jam

MJ-1024

Is there any paper remaining on the transport path in the finisher, saddle stitcher section or equipment?

↓ YES → Remove the paper.

NO

Is the saddle stitcher door closed?

↓ NO → Close the door.

YES

Is either of the connectors J10 or J11 on saddle stitcher controller PC board disconnected?

Are the harnesses between the saddle stitcher controller PC board and cover opening sensors (delivery cover sensor [PI3], inlet cover sensor [PI9]) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is each of the sensors (delivery cover sensor, inlet cover sensor) working properly?

| NO → 1) Connect the connectors of the each sensor securely.
↓ 2) Replace the sensors.

YES

Replace the finisher controller PC board.

[EAA0] Power-ON jam

MJ-1024

Is there any paper remaining on the transport path in the finisher or saddle stitcher section?

↓ YES → Remove the paper.

NO

Is any of the connectors J9, J10 and J13 on the saddle stitcher controller PC board disconnected?

Is the harness between the saddle stitcher controller PC board and each sensor (No.1 paper sensor [PI18], No.2 paper sensor [PI19], No.3 paper sensor [PI20], the vertical path paper sensor [PI17] and the delivery sensor[PI11]) open circuited?

↓ YES → Connect the connectors securely. Replace the harnesses.

NO

Is each of the sensors (No.1 paper sensor, No.2 paper sensor, No.3 paper sensor, the vertical path paper sensor, and the delivery sensor) working properly? (Check the movement of the actuator.)

↓ NO → 1) Connect the connectors of the sensors securely.
2) Attach the actuators securely if their shafts are out of place.
3) Replace the sensors.

↓ YES

Replace the saddle stitcher controller PC board.

[EAB0] Paper transport stop jam

MJ-1024

Is there any paper remaining on the transport path in the finisher, saddle stitcher section or equipment?

↓ YES → Remove the paper.

NO

Is the connector J708 on finisher controller PC board disconnected?

Is the harness between the finisher controller PC board and inlet sensor [PI33] open circuited?

Is either of the connectors J9 or J10 on the saddle stitcher controller PC board disconnected?

Is the harness between the saddle stitcher controller PC board and each sensor (No.1 paper sensor [PI18], No.2 paper sensor [PI19], No.3 paper sensor [PI20] and the delivery sensor [PI11]) open circuited?

↓ YES → Connect the connectors securely. Replace the harnesses.

NO

Is each of the sensors (the inlet sensor, No.1 paper sensor, No.2 paper sensor, No.3 paper sensor and the delivery sensor) working properly? (Check the movement of the actuator.)

↓ NO → 1) Connect the connectors of the sensors securely.
2) Attach the actuators securely if their shafts are out of place.
3) Replace the sensors.

↓ YES

Replace the saddle stitcher controller PC board.

[EAC0] Transport delay jam

MJ-1024

Is there any paper remaining on the transport path in the finisher, saddle stitcher section or equipment?

↓ YES → Remove the paper.

NO

Is the connector J708 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and inlet sensor (PI33) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the inlet sensor working properly? (Check the movement of the actuator.)

↓ NO → 1) Connect the connector of the sensor securely.
2) Attach the actuator securely if its shaft is out of place.
3) Replace the sensor.

↓ YES

Replace the finisher controller PC board.

[4] Paper jam in puncher unit

[E9F0] Punching jam

MJ-1023/1024

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is the connector J605A on the punch controller PC board disconnected?

Is the harness connecting the punch controller PC board and punch home position sensor (PI63) open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the punch home position sensor working properly?

↓ NO → 1) Connect the connector of the punch home position sensor securely.
2) Replace the punch home position sensor.

↓

YES

Replace the punch controller PC board.

[5] Other paper jam

[EAD0] Print end command time-out jam

Is the main motor rotating normally?

↓

NO

- 1) Replace the SYS board.
- 2) Replace the LGC board.

[EAE0] Receiving time-out jam

Is the finisher working?

↓ YES → Replace the finisher controller PC board.

NO

- 1) Check if the voltage (24V) is being supplied to the finisher.
- 2) Check the connection of the LGC board and IPC board.
- 3) Check if the harness connecting the IPC board and finisher I/F connector of the equipment side is open circuited.
- 4) Check if the harness connecting the I/F connector of the finisher side and finisher controller PC board is open circuited.
- 5) Replace the finisher controller PC board.

[EB30] Ready time-out jam

Is there paper in the equipment?

↓ NO → Replace the LGC board.

YES

Are the IPC board and LGC board properly connected to each other?

↓ NO → Connect them properly.

YES

Is the harness securely connected to the IPC board?

↓ NO → Connect the harness properly.

YES

Is any of the connector pins of the harness connecting the equipment and finisher disconnected or any of those harnesses open circuited?

↓ NO → Connect the pin or replace the harness.

YES

- 1) Replace the IPC board.
- 2) Replace the LGC board.
- 3) Replace the finisher controller PC board.

5.1.8 Drive system related service call

[C010] Main motor abnormality

Is the main motor working? (Perform the output check: 03-101/151)

- NO →
- 1) Check if the connector J581 of the main motor is disconnected.
 - 2) Check if the connector CN336 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor patterns on the main motor board and LGC board are short circuited or open circuited.
 - 5) Replace the main motor.
 - 6) Replace the LGC board.
- ↓

YES

- 1) Check if the PLL lock signal CN336-8 pin output from the LGC board is always level "L".
- 2) Check if the voltage supplied to the ASIC input terminal IC40-152 pin is always "L".
- 3) Replace the LGC board.

[C020] Developer motor abnormality

Is the developer unit motor working? (Perform the output check: 03-112/162)

- NO →
- 1) Check if the connector J578 of the developer motor is disconnected.
 - 2) Check if the connector CN337 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor patterns on the developer motor board and LGC board are short circuited or open circuited.
 - 5) Replace the developer motor.
 - 6) Replace the LGC board.
- ↓

YES

- 1) Check if the PLL lock signal CN337-B6 pin output from the LGC board is always level "L".
- 2) Check if the voltage supplied to the ASIC input terminal IC40-150 pin is always "L".
- 3) Replace the LGC board.

[C030] Transport motor abnormality

Is the transport motor working? (Perform the output check: 03-123/173)

- NO →
- 1) Check if the connector J582 of the transport motor is disconnected.
 - 2) Check if the connector CN337 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor patterns on the transport motor board and LGC board are short circuited or open circuited.
 - 5) Replace the transport motor.
 - 6) Replace the LGC board.
- ↓

YES

- 1) Check if the PLL lock signal CN337-A7 pin output from the LGC board is always level "L".
- 2) Check if the voltage supplied to the ASIC input terminal IC40-149 pin is always "L".
- 3) Replace the LGC board.

5.1.9 Paper feeding system related service call

[C040] PFP motor abnormality

Is the PFP motor working? (Perform the output check: 03-109/159)

- NO →
- 1) Check if the signal line connector CN503 of the PFP motor is disconnected.
 - 2) Check if the power line connector CN502 of the PFP motor is disconnected.
 - 3) Check if the connector CN246 on the PFP board is disconnected.
 - 4) Check if the signal line connector CN241 on the PFP board is disconnected.
 - 5) Check if the power line connector CN242 on the PFP board is disconnected.
 - 6) Check if the connector CN332 on the LGC board is disconnected.
 - 7) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 8) Check if the conductor patterns on the PFP motor board, PFP board and LGC board are short circuited or open circuited.
 - 9) Replace the PFP motor.
 - 10) Replace the PFP board.
 - 11) Replace the LGC board.
- ↓

YES

Is the LED on the PFP motor board lit without flashing?

- NO →
- 1) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 2) Check if the conductor patterns on the PFP motor board, PFP board and LGC board are short circuited or open circuited.
 - 3) Replace the PFP motor.
 - 4) Replace the PFP board.
 - 5) Replace the LGC board.
- ↓

YES

- 1) Check if the PLL lock signal CN246-8 pin output from the PFP board is always "L" level.
- 2) Check if the voltage supplied to the microcomputer input terminal IC5-17 pin is always "L" level.
- 3) Replace the PFP board.
- 4) Replace the LGC board.

[C130] Upper drawer tray abnormality

[C140] Lower drawer tray abnormality

Does the tray go up? (Perform the output check: 03-242, 243)



- NO →
- 1) Check if the connector of the tray-up motor is disconnected.
 - 2) Check if the connector CN341 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the tray-up motor.
 - 6) Replace the LGC board.

YES

Is the tray-up sensor working? (Perform the input check: 03-[FAX]OFF/[6]/[H], ./[6]/[G])



- NO →
- 1) Check if the connector of the sensor is disconnected.
 - 2) Check if the connector CN341 on the LGC board is disconnected.
 - 3) Check if the slit reaches the sensor.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 6) Replace the tray-up sensor.
 - 7) Replace the LGC board.

YES

- 1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 2) Replace the LGC board.

[C150] PFP upper drawer tray abnormality

[C160] PFP lower drawer tray abnormality

Does the tray go up? (Perform the output check: 03-278, 280)

- NO →
- 1) Check if the connector of the tray-up motor is disconnected.
 - 2) Check if any of the connectors CN241, CN242 and CN244 on the PFP board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
 - 6) Replace the tray-up motor.
 - 7) Replace the PFP board.
 - 8) Replace the LGC board.
- ↓

YES

Is the tray-up sensor working? (Perform the input check: 03-[FAX]OFF/[2]/[H], /[4]/[H])

- NO →
- 1) Check if the connector of the sensor is disconnected.
 - 2) Check if any of the connectors CN241, CN247 and CN248 on the PFP board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the slit reaches the sensor.
 - 5) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 6) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
 - 7) Replace the tray-up sensor.
 - 8) Replace the PFP board.
 - 9) Replace the LGC board.
- ↓

YES

- 1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 2) Replace the LGC board.

[C180] LCF tray-up motor abnormality

Does the tray move? (Perform the output check: 03-271)

- NO →
- 1) Check if the connector of the LCF tray-up motor is disconnected.
 - 2) Check if any of the connectors CN100, CN101 and CN103 on the LCF board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
 - 6) Replace the LCF tray-up motor.
 - 7) Replace the LCF board.
 - 8) Replace the LGC board.
- ↓

YES

Are the LCF tray-up sensor and LCF tray bottom sensor working?

(Perform the input check: 03-[FAX]OFF/[5]/[F], /[3]/[A])

- NO →
- 1) Check if the connectors of the sensors are disconnected.
 - 2) Check if any of the connectors CN100, CN104 and CN105 on the LCF board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the slit reaches the sensors.
 - 5) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 6) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
 - 7) Replace the sensor.
 - 8) Replace the LCF board.
 - 9) Replace the LGC board.
- ↓

YES

- 1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 2) Replace the LGC board.

[C1A0] LCF end fence motor abnormality

Is the LCF end fence motor working? (Perform the output check: 03-207)

- NO →
- 1) Check if the connector of the LCF end fence motor is disconnected.
 - 2) Check if any of the connectors CN100, CN101 and CN103 on the LCF board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 5) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
 - 6) Replace the LCF end fence motor.
 - 7) Replace the LCF board.
 - 8) Replace the LGC board.
- ↓

YES

Are the LCF end fence home/stop position sensors working?

(Perform the input check: 03-[FAX]OFF/[5]/[A], /[5]/[B])

- NO →
- 1) Check if the connectors of the sensors are disconnected.
 - 2) Check if either of the connectors CN100 or CN107 on the LCF board is disconnected.
 - 3) Check if the connector CN344 on the LGC board is disconnected.
 - 4) Check if the slit reaches the sensors.
 - 5) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 6) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
 - 7) Replace the sensors.
 - 8) Replace the LCF board.
 - 9) Replace the LGC board.
- ↓

YES

- 1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 2) Replace the LGC board.

[C1B0] LCF transport motor abnormality

Is the LCF transport motor working? (Perform the output check: 03-122/172)

- NO →
- 1) Check if the connector CN112 of the LCF transport motor is disconnected.
 - 2) Check if the connector CN102 on the LCF board is disconnected.
 - 3) Check if the signal line connector CN100 on the LCF board is disconnected.
 - 4) Check if the power line connector CN101 on the LCF board is disconnected.
 - 5) Check if the connector CN344 on the LGC board is disconnected.
 - 6) Check if the connector pins are disconnected or the harnesses are open circuited.
 - 7) Check if the conductor patterns on the LCF transport motor board, LCF board and LGC board are short circuited or open circuited.
 - 8) Replace the LCF transport motor.
 - 9) Replace the LCF board.
 - 10) Replace the LGC board.
- ↓

YES

- 1) Check if the connector pins are disconnected or the harnesses are open circuited.
- 2) Check if the conductor patterns on the LCF transport motor board, LCF board and LGC board are short circuited or open circuited.
- 3) Check if the PLL lock signal CN102-3 pin output from the LCF board is always "L" level.
- 4) Check if the voltage supplied to the microcomputer input terminal IC103-17 pin is always "L" level.
- 5) Replace the LCF transport motor.
- 6) Replace the LCF board.
- 7) Replace the LGC board.

5.1.10 Scanning system related service call

[C260] Peak detection error

Does the exposure lamp light? (Perform the output check: 03-267)

- | YES →
- 1) Check if the connectors on the CCD and SLG boards are disconnected.
 - 2) Check if the shading correction plate is dirty.
 - 3) Check if the conductor pattern on the CCD board is short circuited or open circuited.
 - 4) Check if the conductor pattern on the SLG board is short circuited or open circuited.
 - 5) Replace the lens unit.
 - 6) Replace the SLG board.

↓
NO

- 1) Check if the connectors of the exposure lamp and inverter are disconnected.
- 2) Check the SLG board if the connector pin CN21 is disconnected or the harness is short circuited or open circuited.
- 3) Check if the conductor pattern on the SLG board is short circuited or open circuited.
- 4) Replace the SLG board.
- 5) Replace the inverter.
- 6) Replace the exposure lamp.

[C270] Carriage home position sensor not going OFF within a specified time

Remove the original glass and move the carriages to the paper feeding side. Turn ON the power and check the following items.

Are the carriages slightly moved to the feeding direction?/Are the carriages staying at a position other than home position?

- ↓ YES → Check if the circuits of the SLG board are abnormal.

NO

- 1) Check if the connector pin is disconnected or the harness is short circuited or open circuited.
- 2) Check if the conductor pattern on the SLG board is short circuited or open circuited.
- 3) Replace the SLG board.

[C280] Carriage home position sensor not going ON within a specified time

Remove the original glass and move the carriages to the paper feeding side. Turn ON the power and check the following items.

Do the carriages make a big noise after they arrive at the home position?

- | YES → The carriage home position sensor is not turned ON.
- 1) Check if the connector of the sensor is disconnected.
 - 2) Check if the circuits of the SLG board are abnormal.

↓
NO

The carriages are stopped at the home position and do not move.

- 1) Check if the connector pins are disconnected or the harnesses are short circuited or open circuited.
- 2) Check if the conductor pattern on the SLG board is short circuited or open circuited.
- 3) Replace the SLG board.

5.1.11 Fuser unit related service call

Note:

Be sure to turn OFF the power and unplug the power cable beforehand when checking the IH control circuit and IH coil.

The fuser unit itself or the part of the unit remains heated and the capacitors are still charged after a while the power cable is unplugged. So make sure the unit is cooled down enough before checking.

[C411/C412] Thermistor/heater abnormality at power-ON

1. Check the power voltage

- (1) Check if the power voltage is normal. (Is the voltage during the operation $\pm 10\%$ of the rated voltage?)

2. Check the thermistors

- (1) Check if the connectors are disconnected.
- (2) Check if the center and side thermistors (front, rear) are in contact with the surface of the fuser roller properly?
- (3) Check if the harnesses of the center and side thermistors (front, rear) are open circuited.

3. Check the heater

- (1) Check if the IH coil is broken.
- (2) Check if the connector of the IH coil is disconnected.
- (3) Check if the thermostat is blown.
- (4) Check if the connectors on the IH control board are disconnected (AC input connector and LGC I/F connectors CN455).
- (5) Check if the IH control board is abnormal.
 - Replace the IH control board.

4. Check the LGC board

- (1) Check if the connectors CN334 are disconnected.
- (2) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- (3) Replace the LGC board.

5. Clear the status counter

After repairing the matter which caused the error [C411/C412], perform the following:

- (1) Turn ON the power while [0] and [8] are pressed simultaneously.
- (2) Key in "400", then press [START].
- (3) Change the current status counter value "1" or "2" to "0", then press [ENTER] or [INTERRUPT] (to cancel [C411/C412]).
- (4) Turn the power OFF and then back ON. Make sure that the equipment enters the normal ready state.

[C443/C445/C446/C447/C449] Heater abnormality after abnormality judgment

1.2.3. Check the thermistors, Heater and LGC board

Check the above components following the procedures 1, 2 and 3 for [C411/C412].

4. Clear the status counter

Change the current status counter value (08-400) "3", "5", "6", "9", "19", "21", "22", "23", "24", "25", "27" or "29" to "0" for [C44X], taking the same procedure as that for [C41X].

- The status counter value is as follows in the following cases.
 - The error occurred during warming-up: "3", "5" or "6"
 - The error occurred after the equipment has become ready: "7"
 - The temperature detected by the center thermistor is 240°C or higher, the temperature detected by the side thermistor is 250°C or higher or the temperature detected by the edge thermistor is 270°C or higher: "9", "19", "21", "22", "23", "25", "27" or "29".
 - The error occurred during printing: "24" or "25"
 - The error occurred during energy saving: "26" or "27"
 - A paper jam occurred: "28" or "29"

[C471/472/475] IH power voltage abnormality or IH initial abnormality

1. Check the AC input voltage

Check if the AC input voltage is within the specified range.

(especially when the heater becomes ON after the power is turned ON (the copier is warming up))

2. Check the thermostat

Check if the thermostat is blown.

3. Check the IH control board

- (1) Check if the AC input connector on the IH control board, the LGC I/F connectors CN455 is disconnected?
- (2) Check if the fuse on the IH control board has blown.
- (3) Replace the IH control board.

4. Check the LGC board

- (1) Check if the connector CN334 are disconnected.
- (2) Check if the conductor pattern on the board is short- or open-circuited.
- (3) Replace the LGC board.

5. Clear the status counter

Change the values "10", "11", "12" of the status counter (08-400) to "0".

[C480] Overheating of IGBT

1. Check the operation of the IH control board cooling fan

Check if the IH control board cooling fan is rotating normally. (Is the connector securely connected?)

2. Check the IH board

- (1) Check if the IGBT or IGBT radiation plate is normal. (Is the radiation plate securely attached?)
- (2) Check if the conductor pattern on the board is short circuited or open circuited.
- (3) Replace the IH board.

3. Clear the status counter

Change the values "12", "15" or "18" of the status counter (08-400) to "0".

- * The status counter value is as follows in the following cases. Change them to "0" respectively.
 - The error occurred before the temperature of the fuser roller reaches 40°C: "12"
 - The error occurred before the equipment has become ready: "15"
 - The error occurred when the equipment is in the ready state: "18"
- (When the only one side of IH coil is energized continuously for 15 seconds)

[C490] IH control circuit or IH coil abnormality

1. Check the IH board

- (1) Check if the conductor pattern on the board is short circuited or open circuited.
- (2) Replace the IH board.

2. Check the IH coil

- (1) Check if the coil is broken or short out.
- (2) Replace the IH coil.

3. Clear the status counter

Change the values "13", "16" or "19" of the status counter (08-400) to "0".

- * The status counter value is as follows in the following cases. Change them to "0" respectively.
- The error occurred before the temperature of the fuser roller reaches 40°C: "13"
- The error occurred before the equipment has become ready: "16"
- The error occurred when the equipment is in the ready state: "19"

When the problem is solved, [C470], [C480] and [C490] can be cleared by turning OFF and ON the main switch so the status counter does not have to be changed to "0".
The value of the status counter remains the same until the next service call overwrites the value.

[C4B0] IGBT overheating abnormality

1. Check the LGC board

- (1) Check if the conductor pattern on the board is short circuited or open circuited.
- (2) Check if NVRAM is mounted.
- (3) Replace the LGC board.

5.1.12 Communication related service call

[C550] RADF I/F error

- (1) Check if the harness connecting the RADF board and SLG board is disconnected or open circuited.
- (2) Check if the conductor pattern on the RADF board is short circuited or open circuited.
- (3) Check if the conductor pattern on the SLG board is short circuited or open circuited.
- (4) Replace the RADF board.
- (5) Replace the SLG board.

[C570] Communication error between Engine-CPU and IPC board

- (1) Check if the LGC board and IPC board are connected properly.
- (2) Check if the conductor pattern on the IPC board is short circuited or open circuited.
- (3) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- (4) Replace the IPC board.
- (5) Replace the LGC board.

[C580] Communication error between IPC board and finisher

- (1) Check if the specified finisher is attached.
- (2) Check if the harness connecting the IPC board and the finisher controller PC board is disconnected or open circuited.
- (3) Check if the conductor pattern on the IPC board is short circuited or open circuited.
- (4) Check if the conductor pattern on the finisher controller PC board is short circuited or open circuited.
- (5) Replace the IPC board.
- (6) Replace the finisher controller PC board.

[F070] Communication error between System-CPU and Engine-CPU

- (1) Check if the harness connecting the SYS board and LGC board is disconnected or open circuited.
- (2) Check the version of the system ROM on the SYS board.
- (3) Check the version of the engine ROM version on the LGC board.
- (4) Replace the SYS board.
- (5) Replace the LGC board.

[F110] Communication error between System-CPU and Scanner-CPU

[F111] Scanner response abnormality

- (1) Check if the harness connecting the SYS board and SLG board is disconnected or open circuited.
- (2) Check the version of the system ROM on the SYS board.
- (3) Check the version of the scanner ROM version on the SLG board.
- (4) Replace the SYS board.
- (5) Replace the SLG board.

5.1.13 RADF related service call

No service call for the RADF (MR-3018).

5.1.14 Circuit related service call

[C900] Connection error between the SYS board and the LGC board

- (1) Check if the connector CN117 on the SYS board is completely inserted or not disconnected.
- (2) Check if the connector CN357 on the LGC board is completely inserted or not disconnected.
- (3) Check if the harness connecting the SYS board (CN117) and the LGC board (CN357) is open circuited.
- (4) Check if the conductor pattern on each board is short circuited or open circuited.
- (5) Replace the SYS board.
- (6) Replace the LGC board.

[C940] Engine-CPU abnormality

Does service call still occur even after turning OFF the main switch then back ON?

↓ NO → Leave it for a while and see how.

YES

- 1) Check if the conductor pattern between the Engine-CPU and FROM is short circuited or open circuited.
- 2) Replace the LGC board if it frequently occurs.

[C950] Memory of the LGC board abnormality, ID abnormality

- (1) Check if the connectors CN331 and CN 343 on the SYS board are completely inserted or not disconnected.
- (2) Check if the connector CN434 on the DRV board is completely inserted or not disconnected.
- (3) Check if the conductor pattern on each board is short circuited or open circuited.
- (4) Replace the NVRAM.
- (5) Replace the LGC board.
- (6) Replace the DRV board.
- (7) Replace the SYS board.
- (8) Ask a specialist for a repair (Abnormal ID).

[C960] Connection error between the LGC board and the DRV board, ID abnormality

- (1) Check if the connectors CN331 and CN343 on the LGC board are completely inserted or not disconnected.
- (2) Check if the connector CN434 on the DRV board is completely inserted or not disconnected.
- (3) Check if the harness connecting the DRV board (J434) and the LGC board (CN360) is open circuited.
- (4) Check if the harness connecting the LGC board (CN331) and the high-voltage transformer (J480) is open circuited.
- (5) Check if the conductor pattern on each board is short circuited or open circuited.
- (6) Replace the DRV board.
- (7) Replace the LGC board.
- (8) Ask a specialist for a repair (Abnormal ID).

[C9E0] Connection error between the SLG board and the SYS board

- (1) Check if the connector CN18 of the SLG board is completely inserted or not disconnected.
- (2) Check if the connector CN102 of the SYS board is completely inserted or not disconnected.
- (3) Check if the harness connecting the SLG board (CN18) and the SYS board (CN102) is open circuited.
- (4) Check if the conductor pattern on each board is short circuited or open circuited.
- (5) Replace the SLG board.
- (6) Replace the SYS board.

[F090] SRAM abnormality on the SYS board

- (1) Turn the power OFF and start up the Setting Mode (08).
- (2) When the message "SRAM ERROR DOES IT INITIALIZE?" is displayed on the LCD, press the [INITIALIZE] button. (SRAM is cleared.)
- (3) Turn the power OFF and then back ON. If the error is not recovered, replace the SYS board.

[F091] NVRAM abnormality on the SYS board

- (1) Turn the power OFF and start up the Setting Mode (08).
- (2) When the message "NVRAM ERROR DOES IT INITIALIZE?" is displayed on the LCD, press the [INTERRUPT] or [INITIALIZE] button. (NVRAM is initialized.)
- (3) Perform the panel calibration (08-692).

Note:

When the NVRAM is initialized, the scanner and image processing related adjustments are also initialized. Readjust them after the NVRAM initialization.

- (4) Turn the power OFF and then back ON. If the error is not recovered, replace the NVRAM on the SYS board.

[F092] SRAM/NVRAM abnormality on the SYS board

- (1) Turn the power OFF and start up the Setting Mode (08).
- (2) When the message "NVRAM/SRAM ERROR DOES IT INITIALIZE?" is displayed on the LCD, press the [INTERRUPT] or [INITIALIZE] button. (SRAM is cleared and NVRAM is initialized.)
- (3) Perform the panel calibration (08-692).

Note:

When the NVRAM is initialized, the scanner and image processing related adjustments are also initialized. Readjust them after the NVRAM initialization.

- (4) Turn the power OFF and then back ON. If the error is not recovered, replace the NVRAM on the SYS board.

[F350] SLG board abnormality

- (1) Check if the conductor pattern on the SLG board is short circuited or open circuited.
- (2) Replace the SLG board.

5.1.15 Laser optical unit related service call

[CA10] Polygonal motor abnormality

Is the polygonal motor rotating?

- NO →
- 1) Check if the connector CN342 on the LGC board is disconnected.
 - 2) Check if the harness is open circuited or the connector pin is disconnected.
 - 3) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 4) Replace the laser optical unit.
 - 5) Replace the LGC board.

↓
YES

Is the printed image distorted?

- YES →
- 1) Check if the connector CN342 on the LGC board is almost disconnected.
 - 2) Check if the harness is almost open circuited or the connector pin is almost disconnected.
 - 3) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 4) Check if the laser unit cooling fan is stopped.
 - 5) Check if the suction area of laser unit cooling fan is plugged up.
 - 6) Replace the laser optical unit.
 - 7) Replace the LGC board.

↓
NO

- 1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 2) Check if the units with high-voltage (developer unit, transfer belt unit and 2nd transfer roller unit) are securely grounded.
- 3) Check if the bias supply joints of the units with high-voltage are securely connected or they are not stained.
- 4) Check if the plate in paper transport system is securely grounded.
- 5) Check if the equipment is grounded.
- 6) Check if the laser unit cooling fan is stopped.
- 7) Check if the suction area of laser unit cooling fan is plugged up.
- 8) Replace the laser optical unit.
- 9) Replace the LGC board.

[CA20] H-Sync detection error

Is the cable (flexible flat type) between the connector (CN345) on the LGC board and connector (CN201) on the LDR board open circuited, broken or disconnected?

- YES →
- 1) Reconnect the cable.
 - 2) Check if the connector on the LGC board hold the cable securely.
 - 3) Replace the laser optical unit.

↓
NO

- 1) Check if the units with high-voltage (developer unit, transfer belt unit and 2nd transfer roller unit) are securely grounded.
- 2) Check if the bias supply joints of the units with high-voltage are securely connected or they are not stained.
- 3) Check if the plate in paper transport system is securely grounded.
- 4) Check if the equipment is grounded.
- 5) Check if the conductor pattern is short circuited or open circuited.
- 6) Replace the LGC board.
- 7) Replace the laser optical unit.

5.1.16 Finisher related service call

[CB20] Delivery motor abnormality

MJ-1022

Rotate the delivery roller by hand. Does it rotate smoothly?

↓ NO → Fix the mechanism.

YES

Is the wiring between the finisher controller PC board and delivery motor (M1) correct?

↓ NO → Correct the wiring.

YES

Is the delivery motor clock sensor (S1) working properly?

↓ NO → Replace the sensor.

YES

- 1) Replace the delivery motor.
- 2) Replace the finisher controller PC board.

[CB30] Tray 1/2 shift motor abnormality

MJ-1023/1024

Are the tray 1 shift area sensors 1-3 and tray 2 shift area sensors 1-3 normal?

↓ NO → Replace the tray 1/2 shift area sensor boards.

YES

Are the wirings between the finisher controller PC board and the tray 1/2 shift motors (M37/M38) correct?

↓ NO → Correct the wirings.

YES

Is there any problem with the tray lift mechanism?

↓ NO → Fix the lift mechanism.

YES

- 1) Replace the tray 1/2 shift motors.
- 2) Replace the finisher controller PC board.

[CB40] Rear aligning plate motor abnormality

MJ-1023/1024

Is the rear aligning plate home position sensor (PI37) normal?

↓ NO → Correct the wiring.

YES

Is there any mechanical problem with the path of aligning plate?

↓ NO → Fix the mechanism.

YES

- 1) Replace the rear aligning plate motor.
- 2) Replace the finisher controller PC board.

[CB50] Stapler motor abnormality

MJ-1022/1023/1024

Is the wiring between the stapler and finisher controller PC board correct?

↓ NO → Correct the wiring.

YES

- 1) Replace the stapler.
- 2) Replace the finisher controller PC board.

[CB60] Stapler unit shift motor abnormality

MJ-1023/1024

Is the stapler shift home position sensor (PI40) working normally?

↓ NO → Replace the sensor.

YES

Is the wiring between the finisher controller PC board and the stapler shift motor (M35) correct?

↓ NO → Correct the wiring.

YES

Is there any mechanical problem with the stapler stand motion path?

↓ YES → Fix the lift mechanism.

NO

- 1) Replace the stapler shift motor.
- 2) Replace the finisher controller PC board.

[CB80] Backup RAM data abnormality

MJ-1023/1024

Is the problem solved by turning the power of the equipment OFF and ON?

↓ YES → End.

NO

- 1) Replace the finisher controller PC board.
- 2) Replace the punch controller PC board.

[CB90] Paper pushing plate motor abnormality

MJ-1024

Are the paper pushing plate home position sensor (PI14), paper pushing plate top position sensor (PI15) and paper pushing plate motor clock sensor (PI1) working normally?

↓ NO → Replace the sensor.

YES

Is the paper pushing plate drive mechanism normal?

↓ NO → Fix the mechanism.

YES

- 1) Replace the paper pushing plate motor (M8).
- 2) Replace the saddle stitcher controller PC board.

[CBA0] Stitch motor (front) abnormality

[CBB0] Stitch motor (rear) abnormality

MJ-1024

Are the front and rear stitchers and their stands installed properly?

↓ NO → Install them properly.

YES

Are the stitcher home position switches (SW7/SW5) and stitcher motors (M7/M6) on the front and rear stitchers working normally?

↓ NO → Replace the front or rear stitcher.

YES

Replace the saddle stitcher controller PC board.

[CBC0] Alignment motor abnormality

MJ-1024

Is the alignment plate home position sensor (PI5) working normally?

↓ NO → Replace the sensor.

YES

Is the alignment plate drive mechanism normal?

↓ NO → Fix the mechanism.

YES

- 1) Replace the alignment motor (M5).
- 2) Replace the saddle stitcher controller PC board.

[CBD0] Guide motor abnormality

MJ-1024

Is the guide home position sensor (PI13) working normally?

↓ NO → Replace the sensor.

YES

Is the guide plate drive mechanism normal?

↓ NO → Fix the mechanism.

YES

- 1) Replacing the guide motor (M3).
- 2) Replace the saddle stitcher controller PC board.

[CBE0] Paper folding motor abnormality

MJ-1024

Are the paper folding motor clock sensor (PI4) and paper folding home position sensor (PI21) working normally?

↓ NO → Replace the sensors.

YES

Is the paper folding roller drive mechanism normal?

↓ NO → Fix the mechanism.

YES

- 1) Replacing the paper folding motor (M2).
- 2) Replace the saddle stitcher controller PC board.

[CBF0] Paper positioning plate motor abnormality

MJ-1024

Is the paper positioning plate home position sensor (PI7) working normally?

↓ NO → Replace the sensor.

YES

Is the paper positioning plate drive mechanism normal?

↓ NO → Fix the mechanism.

YES

1) Replacing the paper positioning plate motor (M4).

2) Replace the saddle stitcher controller PC board.

[CC00] Sensor connector abnormality

MJ-1024

Are the guide home position sensor (PI13), paper pushing plate home position sensor (PI14) and paper pushing plate top position sensor (PI15) connected to the saddle stitcher controller PC board?

↓ NO → Connect them to the board.

YES

Is the wiring between the sensors and the saddle stitcher correct?

↓ NO → Correct the wiring.

Is 5V DC being supplied from the connector pins J9-7, -10 and -13 on the saddle stitcher controller PC board?

↓ NO → Replace the saddle stitcher controller PC board.

YES

Are the connector pins J9-8, -11 and -14 on the saddle stitcher controller PC board correctly connected to the ground?

↓ NO → Replace the saddle stitcher controller PC board.

YES

End.

[CC10] Microswitch abnormality

MJ-1024

Are the front cover switch (MS31), inlet door switch (SW1) and delivery door switch (SW3) normal?

↓ NO → Replace the switches.

YES

Measure the voltage between J704-1 (+) and J704-2 (-) on the finisher controller PC board. Is it 24V?

↓ NO → Replace the finisher controller PC board.

Is the wiring between J704 on the finisher controller PC board and J1 on the saddle stitcher controller PC board correct?

↓ NO → Correct the wiring.

YES

Replace the saddle stitcher controller PC board.

[CC20] Communication error between finisher and saddle stitcher

MJ-1024

Is the problem solved by turning OFF and ON the power switch of the equipment?

↓ YES → End.

NO

Is the wiring between the finisher controller PC board and the saddle stitcher controller PC board connected?

↓ NO → Connect the wiring.

YES

- 1) Replace the finisher controller PC board.
- 2) Replace the saddle stitcher controller PC board.

[CC30] Stack processing motor abnormality

MJ-1022

[Procedure 1]

Is the tension of the drive belt normal?

↓ NO → Loosen the adjustment screw to adjust its tension.

YES

Does the bushing attached to the returning roller shaft smoothly move up and down?

↓ NO → Apply grease on the cut-out part of the front side frame with where the bushing contacts.

Is the spring of the returning roller detached?

↓ YES → Attach the spring.

NO

Is the wiring between the finisher controller PC board and stack processing motor (M2) correct?

↓ NO → Correct the wiring.

YES

Is the stack delivery lever home position sensor (S8) working properly?

↓ NO → Replace the sensor.

YES

- 1) Replacing the stack processing motor.
- 2) Replace the finisher controller PC board.

[Procedure 2]

Does the bushing attached to the returning roller shaft smoothly move up and down?

↓ NO → Apply grease on the cut-out part of the front side frame with where the bushing contacts.

YES

Is the spring of the returning roller detached?

↓ YES → Attach the spring.

NO

Is the tension of the stack processing motor drive belt normal?

↓ NO → Loosen the adjustment screw to adjust its tension.

YES

Is the returning roller home position sensor (S3) working properly?

↓ NO → Replace the sensor.

YES

- 1) Replace the stack processing motor.
- 2) Replace the finisher controller PC board.

[CC40] Swing motor abnormality

MJ-1023/1024

Is the swing unit home position sensor (PI35) normal?

↓ NO → Replace the sensor.

YES

Is the wiring between the finisher controller PC board and the swing motor (M36) correct?

↓ NO → Correct the wiring.

YES

Is the swing mechanism normal?

↓ NO → Fix the mechanism.

YES

- 1) Replace the swing motor.
- 2) Replace the finisher controller PC board.

[CC50] Horizontal registration motor abnormality

MJ-1023/1024 (when MJ-6004 is installed)

Is the horizontal registration home position sensor (PI61) working normally?

↓ NO → Replace the sensor.

YES

Is the wiring between the horizontal registration home position sensor and finisher controller PC board correct?

↓ NO → Correct the wiring.

YES

Is the horizontal registration mechanism normal?

↓ NO → Fix the mechanism.

YES

- 1) Replace the horizontal registration motor (M62).
- 2) Replace the punch controller PC board.
- 3) Replace the finisher controller PC board.

[CC60] Punch motor abnormality

MJ-1023/1024 (when MJ-6004 is installed)

Are the punch home position sensor (PI63) and punch motor clock sensor (PI62) working normally?

↓ NO → Replace the sensors.

YES

Is the wiring between the sensors and finisher controller PC board correct?

↓ NO → Correct the wiring.

YES

Is the punching mechanism normal?

↓ NO → Fix the mechanism.

YES

- 1) Replace the punch motor (M61).
- 2) Replace the punch controller PC board.
- 3) Replace the finisher controller PC board.

[CC80] Front jogging motor abnormality/Front aligning plate motor abnormality

MJ-1022 (Front jogging motor abnormality)

Is the front jogging plate home position sensor (S6) working properly?

↓ NO → Replace the sensor.

YES

Is the wiring between the finisher controller PC board and front jogging motor (M3) correct?

↓ NO → Correct the wiring.

YES

Has the rack run over the stopper of the roll?

↓ YES → Fix it.

NO

- 1) Replace the front jogging motor.
- 2) Replace the finisher controller PC board.

MJ-1023/1024 (Front aligning plate motor abnormality)

Is the front aligning plate home position sensor (PI36) normal?

↓ NO → Replace the sensor.

YES

Is the wiring between the finisher controller PC board and the front aligning plate motor (M33) correct?

↓ NO → Correct the wiring.

YES

Is there any mechanical problem with the path of aligning plate?

↓ NO → Fix the mechanism.

YES

- 1) Replace the front aligning plate motor.
- 2) Replace the finisher controller PC board.

[CC90] Upper stack tray lift motor abnormality

MJ-1022

Is the wiring between the finisher controller PC board and upper stack tray lift motor (M5) correct?

↓ NO → Correct the wiring.

YES

Are the front and rear sides of the upper stack tray leveled?

↓ NO → Level them.

YES

Is the upper stack tray lift motor clock sensor (S19) working properly?

↓ NO → Level them.

YES

Is the stack tray paper height sensor (S10) working properly?

↓ NO → Replace the sensor.

YES

Are the upper stack tray upper limit sensor (S25), upper stack tray full sensor (S23) and stack processing safety switch (S26) working properly?

↓ NO → Replace the sensor or sensor controller PC board.

YES

Does the voltage between the pins J14-1 and -2 on the finisher controller PC board become 24V when the upper stack tray lift motor starts rotating?

↓ NO → Replace the finisher controller PC board.

YES

Check the wiring between the upper stack tray lift motor and finisher controller PC board. If there is no problem, replace the upper stack tray lift motor.

[CCA0] Lower stack tray lift motor abnormality

MJ-1022

Is the wiring between the finisher controller PC board and lower stack tray lift motor (M7) correct?

↓ NO → Correct the wiring.

YES

Are the front and rear sides of the lower stack tray leveled?

↓ NO → Level them.

YES

Is the lower stack tray lift motor clock sensor (S9) working properly?

↓ NO → Replace the sensor.

YES

Is the stack tray paper height sensor (S10) working properly?

↓ NO → Replace the sensor.

YES

Are the lower stack tray upper limit sensor (S13) and lower stack tray full sensor (S23) working properly?

↓ NO → Replace the sensor or sensor controller PC board.

YES

Does the voltage between the pins J3-1 and -2 on the finisher controller PC board become 24V when the lower stack tray lift motor starts rotating?

↓ NO → Replace the finisher controller PC board.

YES

Check the wiring between the upper stack tray lift motor and finisher controller PC board. If there is no problem, replace the motor.

[CCB0] Rear jogging motor abnormality

MJ-1022

Is the rear jogging plate home position sensor (S7) working properly?

↓ NO → Replace the sensor.

YES

Is the wiring between the finisher controller PC board and rear jogging motor (M4) correct?

↓ NO → Correct the wiring.

YES

Has the rack run over the stopper of the roll?

↓ YES → Fix it.

NO

- 1) Replace the rear jogging motor.
- 2) Replace the finisher controller PC board.

[CCD0] Stack ejection motor abnormality

MJ-1023/1024

Is the shutter home position sensor (PI45) normal?

↓ NO → Replace the sensor.

YES

Are the wirings between the finisher controller PC board and the stack ejection motor (M32)/ shutter clutch (CL31) correct?

↓ NO → Correct the wirings.

YES

Is there any problem with the shutter mechanism?

↓ YES → Fix the shutter mechanism.

NO

- 1) Replace the stack ejection motor and shutter clutch.
- 2) Replace the finisher controller PC board.

[CCE0] Rear end assist motor abnormality

MJ-1023/1024

Is the rear end assist guide home position sensor (PI39) normal?

↓ NO → Replace the sensor.

YES

Is the wiring between the finisher controller PC board and the rear end assist motor (M39) correct?

↓ NO → Correct the wiring.

YES

Is there any problem with the rear end assist mechanism?

↓ YES → Fix the rear end assist mechanism.

NO

- 1) Replace the rear end assist motor.
- 2) Replace the finisher controller PC board.

[CCF0] Gear change motor abnormality

MJ-1023/1024

Is the gear change home position sensor (PI49) normal?

↓ NO → Replace the sensor.

YES

Is the wiring between the finisher controller PC board and the gear change motor (M40) correct?

↓ NO → Correct the wiring.

YES

Is there any problem with the gear change mechanism?

↓ YES → Fix the gear change mechanism.

NO

- 1) Replace the gear change motor.
- 2) Replace the finisher controller PC board.

[CE00] Communication error between finisher and puncher unit

MJ-1023/1024 (When MJ-6004 is installed)

Is the problem solved by turning OFF and ON the power of the equipment?

↓ YES → End.

NO

Is the wiring between the finisher controller PC board and punch controller PC board correct?

↓ NO → Correct the wiring.

YES

- 1) Replace the finisher controller PC board.
- 2) Replace the punch controller PC board.

5.1.17 Image control related service call

- (1) Based on the procedure of [CE10], [CE20] and [CE40] described below, check the status and take appropriate actions. And then perform the forced performing of image quality closed-loop control according to the following procedure.
 1. While pressing [0] and [5] simultaneously, turn ON the power.
 2. Key in [395], and then press the [START] button. Confirm that the image quality control has finished normally.

- (2) After confirming the items in (1), clear the abnormal detection counter of image quality control.
 1. While pressing [0] and [8] simultaneously, turn ON the power.
 2. Key in [573], and then press the [START] button.
 3. Rewrite the displayed status counter from "1" - "16" to "0", and then press the [ENTER] or [INTERRUPT] button.
 4. Key in [574], and then press the [START] button.
 5. Rewrite the displayed status counter from "1" - "16" to "0", and then press the [ENTER] or [INTERRUPT] button.
 6. Key in [575], and then press the [START] button.
 7. Rewrite the displayed status counter from "1" - "16" to "0", and then press the [ENTER] or [INTERRUPT] button.
 8. Key in [576], and then press the [START] button.
 9. Rewrite the displayed status counter from "1" - "16" to "0", and then press the [ENTER] or [INTERRUPT] button.

[CE10] Image quality sensor abnormality (OFF level)

Is the connector of the image quality sensor, or the connector CN338 on the LGC board disconnected?

Is the harness between the LGC board and the image quality sensor, or the harness between the LGC board and the switching power supply open circuited?

↓ YES → Connect the connector securely. Replace the harness.

NO

Is the output voltage from the 12V-power supply normal?

↓ NO → Check the power supply system and replace the switching power supply.

YES

- 1) Replace the image quality sensor.
- 2) Replace the LGC board.

[CE20] Image quality sensor abnormality (no pattern level)

- 1) Check if the transfer belt or transfer belt unit are securely installed.
- 2) Check for any abnormal stain caused by poor cleaning, large flaw or break on the transfer belt surface.
- 3) Check if the drum and the transfer belt are rotating. If any abnormality is found, correct any mechanical problem.

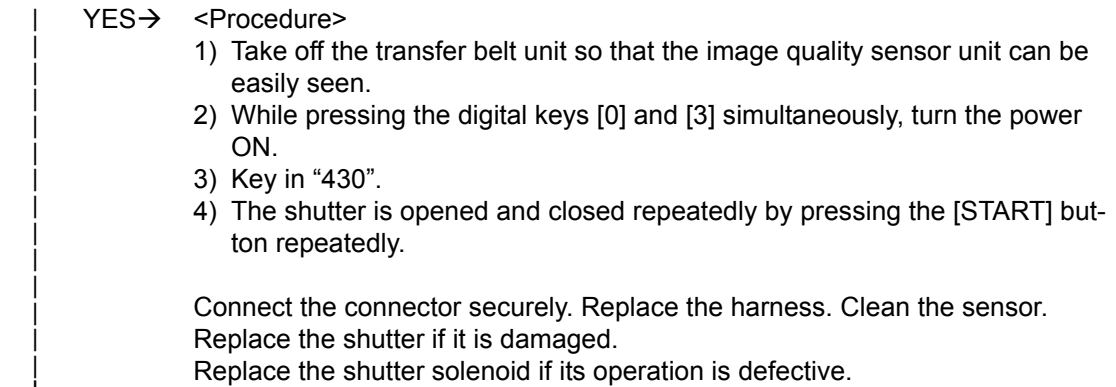
Is the connectors CN338 on the LGC board disconnected?

Is the connector of the image quality sensor disconnected or the surface of the sensor stained?

Is the harness between the LGC board and the image quality sensor open circuited?

Is the shutter of image quality sensor opening and closing normally?

Is the shutter damaged?



NO

Is the output voltage from the 12V-power supply normal?

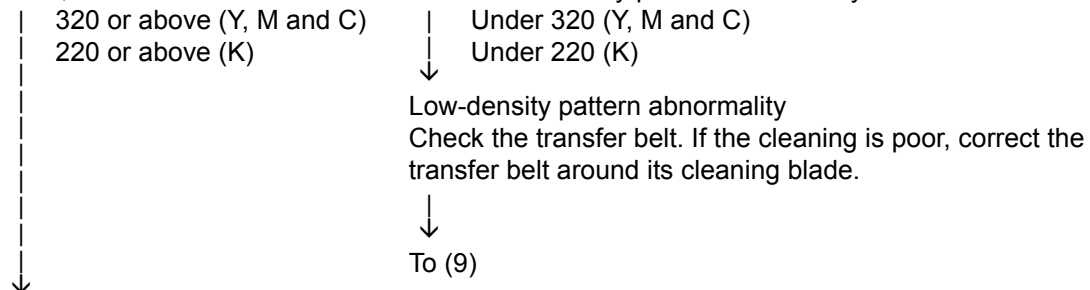
NO → Check the power supply system, and replace the switching power supply.

YES

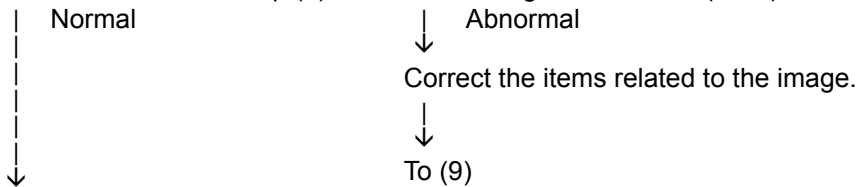
- 1) Replace the image quality sensor.
- 2) Replace the LGC board.

[CE40] Image quality control test pattern abnormality

- (1) Use "Image quality control abnormal detection counter Y to K display/0 clearing (08-573 to 576)" to check the abnormal occurring condition for each color.
- (2) Check "Output value display of image quality sensor / Low-density pattern (05-391-0 to 3)" to check if the low-density pattern abnormality occurs for each color. The values under 320 for Y, M and C, and under 220 for K are defined as low-density pattern abnormality.



- (3) Check "Output value display of image quality sensor / High-density pattern (05-390-0 to 3)" to check if the high-density pattern abnormality occurs for each color and identify the color which pattern is abnormal. If the value is 630 or above, it is defined as high-density pattern abnormality.
- (4) Set the values of "Image quality closed-loop control / Contrast voltage (08-556)" and "Image quality closed-loop control / Laser power (08-557)" to "0" (Invalid).
- (5) Perform "Enforced performing of image quality open-loop control (05-394)".
- (6) Output the image quality control test pattern (04-270) more than one time and check the patch of the color identified in step (3) to see if the image is abnormal (Note).



- (7) Replace the image quality sensor.
- (8) Set the values of "Image quality closed-loop control / Contrast voltage (08-556)" and "Image quality closed-loop control / Laser power (08-557)" to "1" (Valid).
- (9) Perform "Enforced performing of image quality open-loop control (05-394)" and make sure it is completed normally. (Error [CE40] does not appear.) Then perform "Automatic gamma adjustment" (Chapter 3.5.1 and 3.6.1).
- (10) Clear all "Image quality control abnormal detection counter Y to K display/0 clearing (08-573 to 576)".

Note:

Abnormal image:

Blank print, Solid print, White banding, Color banding, White spots, Poor transfer, Uneven image density, Faded image (low density), Uneven light distribution, Blotched image.

[CE50] Temperature/humidity sensor abnormality

Is the connector CN333 on the LGC board or the connector of the temperature/humidity sensor disconnected?

Is the harness between the LGC board and the temperature/humidity sensor disconnected ?

↓ YES→ Connect the connector securely. Replace the harness.

NO

- 1) Replace the temperature/humidity sensor.
- 2) Replace the LGC board.

[CE90] Drum thermistor abnormality

Is the connector CN333 on the LGC board, or the connector of the drum thermistor disconnected?

Is the harness between the LGC board and the drum thermistor disconnected?

↓ YES→ Connect the connector securely. Replace the harness.

NO

- 1) Replace the drum thermistor.
- 2) Replace the LGC board.

5.1.18 Copy process related service call

[C360] Charger cleaner motor abnormality

- (1) Check if the main charger is installed normally.
- (2) Check if the charger wire is broken.
- (3) Check if any of the connector pins of the charger cleaner front/rear position detection switch is disconnected.
- (4) Check if the cleaning pads are damaged or removed.
- (5) Check if any of the connector pins of the charger cleaner motor is disconnected.
- (6) Replace the charger cleaner motor.
- (7) Replace the LGC board.

[C970] High-voltage transformer abnormality

- (1) Is the main charger installed securely?
- (2) Check if the spring of high-voltage supply contact point is deformed.
- (3) Check if the charger wire is broken or the main charger grid is deformed.
- (4) Check if any foreign matter is on the charger wire or main charger grid.

[CEA0] Revolver home position detection abnormality

Is the revolver home position sensor working properly?


(Perform the input check: 03-[FAX]ON/[2]/[C])

- NO →
- 1) Check if the connector or joint connector of the revolver home position sensor is disconnected.
 - 2) Check if the connector CN331 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the revolver home position sensor.
 - 6) Replace the LGC board.

↓
YES

- 1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 2) Replace the LGC board.

[CEB0] Black developer unit lifting movement abnormality

Check the timing of the black developer lifting clutch (stop position), and adjust it if it deviates.
( P.3-61 "3.11.3 Black developer unit lift up/down timing adjustment")



Is the black developer lifting clutch working properly? (Perform the output check: 03-433)

- NO →
- 1) Check if the connector of the black developer lifting clutch is disconnected.
 - 2) Check if the connector CN339 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the black developer lifting clutch.
 - 6) Replace the LGC board.

YES

Are the black developer contact position detection sensor and black developer contact timing detection sensor working properly? (Perform the input check: 03-[FAX]ON/[1]/[C], /[1]/[B]

- NO →
- 1) Check if the connectors of the black developer contact position detection sensor or black developer contact timing detection sensor are disconnected.
 - 2) Check if the connector CN333 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the black developer contact position detection sensor and black developer contact timing detection sensor.
 - 6) Replace the LGC board.

YES

- 1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 2) Replace the LGC board.

[CEC0] 2nd transfer roller position detection abnormality

Is the 2nd transfer roller contact clutch working properly? (Perform the output check: 03-435)

- NO →
- 1) Check if the connector or joint connectors of the 2nd transfer contact clutch are disconnected.
 - 2) Check if the connector CN338 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the 2nd transfer roller contact clutch.
 - 6) Replace the LGC board.
- ↓

YES

Is the 2nd transfer roller position detection sensor working properly?

(Perform the input check:03-[FAX]ON/[1]/[A])

- NO →
- 1) Check if the connector or joint connectors of the 2nd transfer roller position detection sensor are disconnected.
 - 2) Check if the connector CN345 on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
 - 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
 - 5) Replace the 2nd transfer roller position detection sensor.
 - 6) Replace the LGC board.
- ↓

YES

- 1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 2) Replace the LGC board.

[CEE0] Transfer belt position detection abnormality (Normal speed)

[CEE1] Transfer belt position detection abnormality (When decelerating)

If the error [CEE0] has occurred, check the transfer belt home position sensor-1. If the error [CEE1] has occurred, check the transfer belt home position sensor-2.

Is there any stain or scratch on the reflection tape inside the transfer belt?

↓ YES → Clean the transfer belt or replace it.
↓ Replace the cleaning pad if it is excessively stained.

NO

Are the transfer belt home position sensors-1 and -2 stained?

↓ YES → Clean them.

NO

Are the transfer belt home position sensors-1 and -2 working properly?

(Perform the input check:03-[FAX]ON/[9]/[H])

↓ NO → 1) Check if the connectors or joint connectors of the transfer belt home position sensors-1 and -2 are disconnected.
2) Check if the connector CN361 on the LGC board is disconnected.
3) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
5) Replace the transfer belt home position sensor-1 and -2.
6) Replace the LGC board.

YES

1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
2) Replace the LGC board.

[CEF0] Revolver motor abnormality

Is the revolver motor working? (Perform the output check: 03-450)

↓ NO → 1) Check if the connector of the revolver motor is disconnected.
2) Check if the connectors CN435 and CN434 on the DRV board are disconnected.
3) Check if the connector CN331 on the LGC board is disconnected.
4) Check if the connector pins are disconnected or the harnesses are open circuited.
5) Check if the conductor patterns on the DRV board and LGC board are short circuited or open circuited.
6) Replace the revolver motor.
7) Replace the DRV board and LGC board.

YES

1) Check if the teeth of the revolver motor gear or the revolver unit gear do not get chipped or cracked.
2) Check if the conductor patterns on the DRV board and LGC board are short circuited or open circuited.
3) Replace the DRV board and LGC board.

5.1.19 Toner density control related service call

[CF20] Toner density detection voltage abnormality

(1) Specify the developer unit with the abnormality by checking the setting values of 08-824-0 to 08-824-2. (When the value is "1", an abnormality occurs.)

(2) Correct the defective section of the unit specified in (1) with the following procedure.

Is the developer material transported properly?

Is the form of magnetic brush is normal?

- | NO → 1) Check if the amount of the developer material is normal or any foreign matter is mixed in.
| 2) Correct the transport mechanism of developer material.
| 3) Check the polar position and correct if necessary.
↓

YES

Is the color auto-toner sensor stained?

- ↓ YES → Clean it.

NO

Is the color auto-toner sensor shutter solenoid working normally?

(Perform the output check: 03-125/175)

Is the color auto-toner sensor working?

- | NO → 1) Check if the connectors or joint connectors of the color auto-toner sensor shutter solenoid and color auto-toner sensor are disconnected.
| 2) Check if the connector CN332 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open circuited.
| 4) Replace the color auto-toner sensor shutter solenoid.
| 5) Check if the conductor pattern on the LGC board is short circuited or open circuited.
| 6) Replace the LGC board.
| 7) Replace the color auto-toner sensor and perform "Enforced correction of color auto-toner sensor light amount (05-208)".
↓

YES

Is the color auto-toner sensor shutter opening position correct?

(Perform the output check: 03-125/175)

- | NO → Adjust the install position of solenoid so that the sensor holder will touch and face the positioning component when opening the shutter.
↓

YES

- 1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
2) Replace the LGC board.

(3) When the correction is completed, reset the values of 08-824-0 to 08-824-2 from "1" to "0" to clear the abnormality.

[CF30] Reference plate detection voltage abnormality

Are the reference plate and color auto-toner sensor stained?

↓ YES → Clean them.

NO

Is the color auto-toner sensor shutter solenoid working normally?

(Perform the output check: 03-125/175)

Is the color auto-toner sensor working?

↓

NO →

- 1) Check if the connectors or joint connectors of the color auto-toner sensor shutter solenoid and color auto-toner sensor are disconnected.
- 2) Check if the connector CN332 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Replace the color auto-toner sensor shutter solenoid.
- 5) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 6) Replace the LGC board.
- 7) Replace the color auto-toner sensor and perform "Enforced correction of color auto-toner sensor light amount (05-208)".

↓

YES

Is the color auto-toner sensor shutter closing position correct?

(Perform the output check: 03-125/175)

↓

NO → Adjust the install position of solenoid so that the gap between the sensor holder and stopper will be 1.0 mm when closing the shutter.

↓

YES

- 1) Replace the LGC board.
- 2) Replace the reference plate and perform "Initialization of color auto-toner sensor light amount correction target value (05-207)".

[CF40] Light amount correction voltage abnormality

- (1) Specify the developer unit with the abnormality by checking the setting values of 08-823-0 to 08-823-2. (When the value is "1", an abnormality occurs.)
- (2) Correct the defective section of the unit specified in (1) with the following procedure.

Is the developer unit inserted properly?

↓ NO → Insert it properly.

YES

Is the developer material transported properly?

Is the form of magnetic brush is normal?

↓ NO →

- 1) Check if the amount of the developer material is normal or any foreign matter is mixed in.
- 2) Correct the transport mechanism of developer material.
- 3) Check the polar position and correct if necessary.

YES

Is the color auto-toner sensor stained?

↓ YES → Clean it.

NO

Is the color auto-toner sensor shutter solenoid working normally?

(Perform the output check: 03-125/175)

Is the color auto-toner sensor working?

↓ NO →

- 1) Check if the connectors or joint connectors of the color auto-toner sensor shutter solenoid and color auto-toner sensor are disconnected.
- 2) Check if the connector CN332 on the LGC board is disconnected.
- 3) Check if the connector pins are disconnected or the harnesses are open circuited.
- 4) Replace the color auto-toner sensor shutter solenoid.
- 5) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 6) Replace the LGC board.
- 7) Replace the color auto-toner sensor and perform "Enforced correction of color auto-toner sensor light amount (05-208)".

YES

Is the color auto-toner sensor shutter opening position correct?

(Perform the output check: 03-125/175)

↓ NO → Adjust the install position of solenoid so that the sensor holder will touch and face the positioning component when opening the shutter.

YES

- 1) Replace the LGC board.
- 2) Replace the reference plate and perform "Initialization of color auto-toner sensor light amount correction target value (05-207)".

- (3) When the correction is completed, reset the values of 08-823-0 to 08-823-2 from "1" to "0" to clear the abnormality.

[CF50] Color auto-toner sensor abnormality

Are the connector of color auto-toner sensor, joint connector and connector CN356 on the LGC board connected normally?

↓ NO → 1) Reconnect the connectors.
2) Correct or replace if the connector pins are disconnected or harnesses are open circuited.

YES

Are the color auto-toner sensor and reference plate stained?

↓ YES → Clean them.

NO

Is the color auto-toner sensor shutter solenoid working normally?

(Perform the output check: 03-125/175)

↓ NO → 1) Check if the connectors or joint connectors of the color auto-toner sensor shutter solenoid and color auto-toner sensor are disconnected.
2) Check if the connector CN332 on the LGC board is disconnected.
3) Check if the connector pins are disconnected or the harnesses are open circuited.
4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
5) Replace the color auto-toner sensor shutter solenoid.
6) Replace the LGC board.

YES

Is the color auto-toner sensor shutter closing position correct?

(Perform the output check: 03-125/175)

↓ NO → Adjust the install position of solenoid so that the gap between the sensor holder and stopper will be 1.0 mm when closing the shutter.

YES

- 1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 2) Replace the LGC board.
- 3) Replace the reference plate and perform "Initialization of color auto-toner sensor light amount correction target value (05-207)".
- 4) Replace the color auto-toner sensor and perform "Enforced correction of color auto-toner sensor light amount (05-208)".

5.1.20 Other service call

[F100] HDD format error

- (1) Check if the HDD is mounted.
- (2) Check if the specified HDD is mounted.
- (3) Check if the connector pins of the HDD are bent.
- (4) Check if the connectors CN112, CN113 on the SYS board is disconnected.
- (5) Replace the harness.
- (6) Format the HDD. (Key in "2" at 08-690.)
- (7) Replace the HDD.
- (8) Replace the SYS board.

[F101] HDD unmounted

[F102] HDD start error

[F103] HDD transfer time-out

[F104] HDD data error

[F105] HDD other error

- (1) Check if the connectors of the HDD are disconnected.
- (2) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
- (3) Perform the bad sector check (08-694). If the check result is OK, recover the data in the HDD. If the check result is failed, replace the HDD.
- (4) Replace the SYS board.

[F106] Point and Print partition damage

- (1) Turn the power OFF and start up the Setting Mode (08).
- (2) Key in "662" and press the [START] button. (Partition clearing is performed.)
- (3) Restart the equipment.
- (4) Access TopAccess. Click the [Administration] tab, and then click the Maintenance Menu to open. Then install the "Point and Print" driver.

[F107] / SHR partition damage

Initialize the Electronic Filing using the Setting Mode (08-666).

[F108] /SHA partition damage

Initialize the shared folder using the Setting Mode (08-667).

[F120] Database abnormality

- (1) Rebuild the databases. (Perform 08-684.)
- (2) If the error is not recovered, initialize the HDD. (Key in "2" at 08-690.)
 - * When "Rebuilding all databases (08-684)" is performed, all data in the Address Book and Mailbox are deleted. Make sure to back up these data in advance of rebuilding and restore the data after rebuilding.

[F130] Invalid MAC address

Compare the serial number of the equipment with a number displayed in 08-995. If they are different, enter the correct serial number at 08-995.

[F200] Data overwrite kit (GP-1060) is taken off

Clear the service call "F200". (Key in "0" at 08-633.)

- * When the Data overwrite kit (GP-1060) is taken off from the equipment, the service call "F200" occurs.

5.1.21 Error in Internet FAX / Scanning Function

Notes:

1. When initializing the Electronic Filing (Setting Mode (08-666)), all data in the Electronic Filing are erased. Back up the data in the Electronic Filing by using the Electronic Filing Function of TopAccess before the initialization.
2. When initializing the shared folder (Setting Mode (08-667)), all data in the shared folder are erased. Back up the data in the shared folder by using Explorer before the initialization.
3. When formatting the HDD (Setting Mode (08-690)), all data in the shared folder, Electronic Filing, Address Book, template, etc. are erased. Back up these data before the initialization. Note that some of data cannot be backed up (Page 5-1).

[1] Internet FAX related error

[1C10] System access abnormality

[1C32] File deletion failure

Turn the power OFF and then back ON. Perform the job in error again.

If the error still occurs, first, check if there are no jobs existing and then perform the HDD formatting (08-690).

[1C11] Insufficient memory

When there are running jobs, perform the job in error again after the completion of the running jobs.

If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[1C12] Message reception error

[1C13] Message transmission error

Turn the power OFF and then back ON. Perform the job in error again.

[1C14] Invalid parameter

When a template is used, form the template again.

If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[1C15] Exceeding file capacity

Reset and extend the "Maximum send to E-mail/iFAX size" or reduce the number of pages and perform the job again.

[1C20] System management module access abnormality

[1C21] Job control module access abnormality

[1C22] Job control module access abnormality

Turn the power OFF and then back ON. Perform the job in error again.

Check if there are no other running jobs and perform the HDD formatting (08-690).

If the recovery is still not completed, replace the SYS board.

[1C30] Directory creation failure

[1C31] File creation failure

[1C33] File access failure

Check if the access privilege to the storage directory is writable.

Check if the server or local disk has a sufficient space in disk capacity.

[1C40] Image conversion abnormality

Turn the power OFF and then back ON. Perform the job in error again.

Replace the main memory and perform the job again.

[1C60] HDD full failure during processing

Reduce the number of pages of the job in error and perform the job again.

Check if the server or local disk has a sufficient space in disk capacity.

[1C61] Address Book reading failure

Turn the power OFF and then back ON. Perform the job in error again.

Reset the data in the Address Book and perform the job again.

[1C62] Memory acquiring failure

Check if there is any job being performed and perform the job in error again.

Turn the power OFF and then back ON. Perform the job in error again.

Replace the main memory and perform the job again.

[1C63] Terminal IP address unset

Reset the Terminal IP address.

Turn the power OFF and then back ON. Perform the job in error again.

[1C64] Terminal mail address unset

Reset the Terminal mail address.

Turn the power OFF and then back ON. Perform the job in error again.

[1C65] SMTP address unset

Reset the SMTP address and perform the job.

Turn the power OFF and then back ON. Perform the job in error again.

[1C66] Server time-out error

Check if the SMTP server is operating properly.

[1C67] NIC time-out error

[1C68] NIC access error

[1C6D] System error

Turn the power OFF and then back ON. Perform the job in error again.

If the error still occurs, replace the SYS board.

[1C69] SMTP server connection error

Reset the login name or password of SMTP server and perform the job again.

Check if the SMTP server is operating properly.

[1C6A] HOST NAME error

Check if there is an illegal character in the device name.

Delete the illegal character and reset the appropriate device name.

[1C6B] Terminal mail address error

Check if there is an illegal character in the Terminal mail address.

Delete the illegal character and reset the appropriate Terminal mail address, then perform the job again.

[1C6C] Destination mail address error

Check if there is an illegal character in the Destination mail address.

Delete the illegal character and reset the appropriate Destination mail address, then perform the job again.

[1C70] SMTP client OFF

Set the SMTP valid and perform the job again.

[1C71] SMTP authentication ERROR

Check that SMTP authentication method, login name and password are correct, then perform authentication again.

[1C72] POP Before SMTP ERROR

Check that both the POP Before SMTP setting and POP3 setting are correct, then perform authentication again.

[1C80] Internet FAX transmission failure when processing E-mail job received

Reset the "Received InternetFax Forward".

[1C81] Onramp Gateway transmission failure

Reset the mail box.

[1C82] Internet FAX transmission failure when processing FAX job received

Reset the "Received Fax Forward".

[1CC1] Power failure

Check if the power cable is connected properly and it is inserted securely.

Check if the power voltage is unstable.

[2] RFC related error

[2500] HOST NAME error (RFC: 500) / Destination mail address error (RFC: 500) / Terminal mail address error (RFC: 500)

[2501] HOST NAME error (RFC: 501) / Destination mail address error (RFC: 501) / Terminal mail address error (RFC: 501)

Check if the Terminal mail address and Destination mail address are correct.

Check if the mail server is operating properly.

Turn the power OFF and then back ON. Perform the job in error again.

[2503] Destination mail address error (RFC: 503)

[2504] HOST NAME error (RFC: 504)

[2551] Destination mail address error (RFC: 551)

Check if the mail server is operating properly.

Turn the power OFF and then back ON. Perform the job in error again.

If the error still occurs, replace the SYS board.

[2550] Destination mail address error (RFC: 550)

Check the state of the mail box in the mail server.

[2552] Terminal/Destination mail address error (RFC: 552)

Turn the power OFF and then back ON. Perform the job in error again.

If the error still occurs, replace the NIC board.

[2553] Destination mail address error (RFC: 553)

Check if there is an illegal character in the mail box in the mail server.

[3] Electronic Filing related error

[2B10] No applicable job error in Job control module

[2B11] JOB status abnormality

[2B20] File library function error

[2B30] Insufficient disk space in BOX partition

[2BC0] Fatal failure occurred

[2BC1] System management module resource acquiring failure

Erase some data in the Electronic Filing and perform the job in error again (in case of [2B30]).

Turn the power OFF and then back ON. Perform the job in error again.

Check if there are no other running jobs and perform the HDD formatting (08-690).

If the recovery is still not completed, replace the SYS board.

[2B50] Image library error

[2B90] Insufficient memory capacity

Turn the power OFF and then back ON. Perform the job in error again.

If the error still occurs, replace the main memory.

Perform the job in error again.

Check if there are no other running jobs and initialize the Electronic Filing using the Setting Mode (08-666).

[2B31] Status of specified Electronic Filing or folder is undefined or being created/deleted

Check if the specified Electronic Filing or folder exists. (If no, this error would not occur.)

Delete the specified Electronic Filing or folder.

Perform the job in error again.

If the specified Electronic Filing or folder can not be deleted, initialize the Electronic Filing using the Setting Mode (08-666).

[2B32] Electronic Filing printing failure: Specified document can not be printed because of client's access (being edited, etc.)

Check if the specified document exists. (If no, this error would not occur.)

Delete the specified document.

Perform the job in error again.

If the specified document can not be deleted, initialize the Electronic Filing using the Setting Mode (08-666).

[2B51] List library error

Check if the Function List can be printed out.

If it can be printed out, perform the job in error again.

If it can not be printed out, replace the main memory.

If the recovery is still not completed, perform the HDD formatting (08-690).

[2BA0] Invalid Box password

Check if the password is correct.

Reset the password.

When this error occurs when printing the data in the Electronic Filing, perform the printing with the administrator's password.

If the recovery is still not completed or in case of invalid password for the operation other than printing (opening the file, etc.), initialize the Electronic Filing using the Setting Mode (08-666).

[2BB1] Power failure

[2BD0] Power failure occurred during restoring of Electronic Filing

Check if the power cable is connected properly and it is inserted securely.

Check if the power voltage is unstable.

[2BE0] Machine parameter reading error

Turn the power OFF and then back ON. Perform the job in error again.

[2BF0] Exceeding maximum number of pages

Reduce the number of inserting pages and perform the job again.

[2BF1] Exceeding maximum number of documents

Backup the documents in the box or folder to PC or delete them.

[2BF2] Exceeding maximum number of folders

Backup the folders in the box or folder to PC or delete them.

[4] E-mail related error

[2C10] System access abnormality

[2C32] File deletion failure

Turn the power OFF and then back ON. Perform the job in error again.

If the error still occurs, first, check if there are no jobs existing and then perform the HDD formatting (08-690).

[2C11] Insufficient memory

When there are running jobs, perform the job in error again after the completion of the running jobs.

If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[2C12] Message reception error

[2C13] Message transmission error

Turn the power OFF and then back ON. Perform the job in error again.

[2C14] Invalid parameter

When a template is used, form the template again.

If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[2C15] Exceeding file capacity

Reset and extend the "Maximum send to E-mail/iFAX size" or reduce the number of pages and perform the job again.

[2C20] System management module access abnormality

[2C21] Job control module access abnormality

[2C22] Job control module access abnormality

Turn the power OFF and then back ON. Perform the job in error again.

Check if there are no other running jobs and perform the HDD formatting (08-690).

If the recovery is still not completed, replace the SYS board.

[2C30] Directory creation failure

[2C31] File creation failure

[2C33] File access failure

Check if the access privilege to the storage directory is writable.

Check if the server or local disk has a sufficient space in disk capacity.

[2C40] Image conversion abnormality

[2C62] Memory acquiring failure

Turn the power OFF and then back ON. Perform the job in error again.

Replace the main memory and perform the job again.

[2C60] HDD full failure during processing

Reduce the number of pages of the job in error and perform the job again.

Check if the server or local disk has a sufficient space in disk capacity.

[2C61] Address Book reading failure

Turn the power OFF and then back ON. Perform the job in error again.

Reset the data in the Address Book and perform the job again.

[2C63] Terminal IP address unset

Reset the Terminal IP address.

Turn the power OFF and then back ON. Perform the job in error again.

[2C64] Terminal mail address unset

Reset the Terminal mail address.

Turn the power OFF and then back ON. Perform the job in error again.

[2C65] SMTP address unset

Reset the SMTP address and perform the job.

Turn the power OFF and then back ON. Perform the job in error again.

[2C66] Server time-out error

Check if the SMTP server is operating properly.

[2C67] NIC time-out error**[2C68] NIC access error****[2C6D] NIC system error**

Turn the power OFF and then back ON. Perform the job in error again.

If the error still occurs, replace the SYS board.

[2C69] SMTP server connection error

Reset the login name and password of SMTP server and perform the job again.

Check if the SMTP server is operating properly.

[2C6A] HOST NAME error (No RFC error)

Check if there is an illegal character in the device name.

Delete the illegal character and reset the appropriate device name.

[2C6B] Terminal mail address error

Check if there is an illegal character in the Terminal mail address.

Delete the illegal character and reset the appropriate Terminal mail address, then perform the job again.

[2C6C] Destination mail address error (No RFC error)

Check if there is an illegal character in the Destination mail address.

Delete the illegal character and reset the appropriate Destination mail address, then perform the job again.

[2C70] SMTP client OFF

Set the SMTP valid and perform the job again.

[2C71] SMTP authentication ERROR

Check that SMTP authentication method, login name and password are correct, then perform authentication again.

[2C72] POP Before SMTP ERROR

Check that both the POP Before SMTP setting and POP3 setting are correct, then perform authentication again.

[2C80] E-mail transmission failure when processing E-mail job received

Reset the "Received InternetFax Forward".

[2C81] Process failure of FAX job received

Reset the setting of the mail box or "Received InternetFax Forward".

[2CC1] Power failure

Check if the power cable is connected properly and it is inserted securely.
Check if the power voltage is unstable.

[5] File sharing related error

[2D10] System access abnormality

[2D32] File deletion failure

[2DA6] File deletion failure

[2DA7] Resource acquiring failure

Delete some files in the shared folder by using Explorer because of automatic/manual file deletion failure (in case of [2DA6])

Turn the power OFF and then back ON. Perform the job in error again.

If the error still occurs, first, check if there are no jobs existing and then perform the HDD formatting (08-690).

[2D11] Insufficient memory

When there are running jobs, perform the job in error again after the completion of the running jobs.

If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[2D12] Message reception error

[2D13] Message transmission error

Turn the power OFF and then back ON. Perform the job in error again.

[2D14] [2D61] Invalid parameter

When a template is used, form the template again.

If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[2D15] Exceeding document number

Delete some documents in the folder, and then perform the job in error again.

[2D20] System management module access abnormality

[2D21] Job control module access abnormality

[2D22] Job control module access abnormality

[2D60] File library access abnormality

Turn the power OFF and then back ON. Perform the job in error again.

Check if there are no other running jobs and perform the HDD formatting (08-690).

If the recovery is still not completed, replace the SYS board.

[2D30] Directory creation failure

[2D31] File creation failure

[2D33] File access failure

Check if the access privilege to the storage directory is writable.

Check if the server or local disk has a sufficient space in disk capacity.

[2D40] Image conversion abnormality

Turn the power OFF and then back ON. Perform the job in error again.

Replace the main memory and perform the job again.

If the error still occurs, first, check if there are no jobs existing and then initialize the shared folder using the Setting Mode (08-667).

[2D62] File server connection error

Check the IP address or path of the server.

Check if the server is operating properly.

[2D63] Invalid network path

Check the network path.

If the path is correct, turn the power OFF and then back ON, and perform the job again.

[2D64] Login failure

Reset the login name and password. Perform the job.
Check if the account of the server is properly set up.

[2D65] Exceeding documents in folder: Creating new document is failed

Delete some documents in the folder.

[2D66] HDD full failure during processing

Reduce the number of pages of the job in error and perform the job again.
Check if the server or local disk has a sufficient space in disk capacity.

[2D67] FTP service not available

Check if the setting of FTP service is valid.

[2D68] File sharing service not available

Check if the setting of SMB is valid.

[2DC1] Power failure

Check if the power cable is connected properly and it is inserted securely.
Check if the power voltage is unstable.

[6] E-mail reception related error

[3A10] [3A11] [3A12] E-mail MIME error

The format of the mail is not corresponding to MIME 1.0.

Request the sender to retransmit the mail in the format corresponding to MIME 1.0.

[3A20] [3A21] [3A22] E-mail analysis error

[3B10] [3B11] [3B12] E-mail format error

[3B40] [3B41] [3B42] E-mail decode error

These errors occur when the mail data is damaged from the transmission to the reception of the mail.

Request the sender to retransmit the mail.

[3A30] Partial mail time-out error

The partial mail is not received in a specified period of time.

Request the sender to retransmit the partial mail, or set the time-out period of the partial mail longer.

[3A40] Partial mail related error

The format of the partial mail is not corresponding to this equipment.

Request the sender to remake and retransmit the partial mail in RFC2046 format.

[3A50] [3A51] [3A52] Insufficient HDD capacity error

[3A60] [3A61] [3A62] Warning of insufficient HDD capacity

These errors occur when the HDD capacity is not sufficient for a temporary concentration of the jobs, etc.

Request the sender to retransmit after a certain period of time, or divide the mail into more than one.

Insufficient HDD capacity error also occurs when printing is disabled for no printing paper.

In this case, supply the printing paper.

[3A70] Warning of partial mail interruption

This error occurs when the partial mail reception setting becomes OFF during the partial mail reception.

Reset the partial mail reception setting ON and then request the sender to retransmit the mail.

[3A80] [3A81] [3A82] Partial mail reception setting OFF

Reset the partial mail reception setting ON and then request the sender to retransmit the mail.

[3B20] [3B21] [3B22] Content-Type error

The format of the attached file is not supported by this equipment (TIFF-FX).

Request the sender to retransmit the file in TIFF-FX.

[3B30] [3B31] [3B32] Charset error

These errors occur when the standard of the Charset is other than ISO-8559-1 or ISO-8559-2.

Request the sender to reformat the Charset into either of the standards described above and then retransmit the mail.

[3C10] [3C11] [3C12] [3C13] TIFF analysis error

These errors occur when the mail data is damaged from the transmission to the reception of the mail, or when the format of the attached file is not supported by this equipment (TIFF-FX).

Request the sender to retransmit the mail.

[3C20] [3C21] [3C22] TIFF compression error

The compression method of the TIFF file is not acceptable for this equipment. (Acceptable: MH/MR/MMR/JBIG)

Request the sender to retransmit the file in the acceptable compression method.

[3C30] [3C31] [3C32] TIFF resolution error

The resolution of the TIFF file is not acceptable for this equipment. (Acceptable: 200 x 100, 200 x 200, 200 x 400, 400 x 400, 300 x 300 or equivalent)

Request the sender to retransmit the file in the acceptable resolution.

[3C40] [3C41] [3C42] TIFF paper size error

The paper size of the TIFF file is not acceptable for this equipment. (Acceptable: A4, B4, A3, B5, LT, LG, LD or ST)

Request the sender to retransmit the file in the acceptable paper size.

[3C50] [3C51] [3C52] Offramp destination error

These errors occur when the FAX number of the offramp destination is incorrect.

Request the sender to correct the FAX number of offramp destination and then retransmit the mail.

[3C60] [3C61] [3C62] Offramp security error

These errors occur when the FAX number of the offramp destination is not on the Address Book.

Check if the FAX number of the offramp destination is correctly entered or the number has not been changed.

[3C70] Power failure error

Check if the mail is recovered after turning ON the power again.

Request the sender to retransmit the mail if it is not recovered.

[3D10] Destination address error

Check if the setting of the server or DNS is correct. Correct if any of the setting is incorrect.

When the content of the setting is correct, confirm the sender if the destination is correct.

[3D20] Offramp destination limitation error

Inform the sender that the transfer of the FAX data over 40 is not supported.

[3D30] FAX board error

This error occurs when the FAX board is not installed or the FAX board has an abnormality.

Check if the FAX board is correctly connected.

[3E10] POP3 server connection error

Check if the IP address or domain name of the POP3 server set for this equipment is correct, or check if POP3 server to be connected is operating properly.

[3E20] POP3 server connection time-out error

Check if POP3 server to be connected is operating properly.

Check if the LAN cable is correctly connected.

[3E30] POP3 login error

Check if the POP3 server login name and password set for this equipment are correct.

[3E40] POP3 Login Type ERROR

Check that the login type (Auto, POP3 or APOP) to the POP3 server is correct.

[3F00] [3F10] [3F20] [3F30] [3F40] File I/O error

These errors occur when the mail data is not transferred properly to the HDD.

Request the sender to retransmit the mail.

Replace the HDD if the error still occurs after retransmission.

[402F] Page memory size error

This error occurs when the expansion memory is not installed or the expansion memory has an abnormality.

Check if the expansion memory exists or not, or it is correctly installed.

[4031] HDD full failure during printing

Reduce the number of pages of the job in error and perform the job again.

Check if the server or local disk has a sufficient space in disk capacity.

[4032] Private-print-only error

Select "Private", and then perform the printing again.

[4033] Printing data storing limitation error

Select "Print", and then perform the printing again.

[4034] e-Filing storing limitation error

Select "Print", and then perform the printing again.

[4035] Local file storing limitation error

Select "Remote" (SMB/FTP) for the destination of the file to save.

[4036] User authentication error

Perform the authentication or register as a user, and then perform the printing again.

[A221] Print job cancellation

This message appears when deleting the job on the screen.

[A222] Print job power failure

When there are running jobs, perform the job in error again after the completion of the running jobs. If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[A290] Limit over error (black)

[A291] Limit over error (black)

[A292] Limit over error (black)

Clear the limit counter (black).

[A2A0] Limit over error (color)

[A2A1] Limit over error (color)

[A2A2] Limit over error (color)

Clear the limit counter (color).

5.2 Troubleshooting for the Image

1) Color deviation

<Symptoms>




| Original mode | Location | | Phenomena |
|------------------------------|--|------------------|---|
| All modes | Color blurred in outline of white text or illustration on a colored background | Color deviation→ |  |
| Text Mode Text/Photo Mode | Outline in black text on a colored background | White void→ |  |
| Photo Mode Map Mode | Color blurred in outline of line or text | Color deviation→ |  |

Fig.5-1

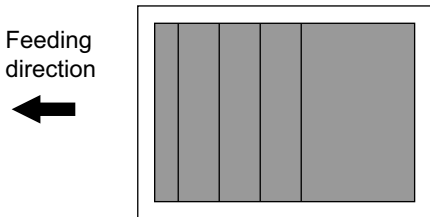
| Cause/Section | Step | Check Item | Measure | Remark |
|--|------|---|---|--------------------------|
| | 1 | Test printing (A3/LD) | Output the built-in grid pattern | For the following checks |
| Drum rotation abnormality | 2 | Check the main motor operation in the test mode (03) to see if there is any rotation abnormality of the drum. | Replace the main motor. | |
| | 3 | Check the main motor operation in the test mode (03) to see if there is any rotation abnormality of the drum. | Reconnect the connectors. Replace the harnesses. Replace the LGC board. | |
| Inadequate main motor rotation speed | 4 | Check the value set for main motor rotation speed. (Is the value significantly different from the default value?) | Reset main motor speed to 128. | |
| Drum coupling and coupling on the equipment side | 5 | Loose coupling, damage, deformation | Check if they are installed properly or replace the couplings. | |
| Transfer belt | 6 | Deformation or damage of the transfer belt or stains on the transfer belt. | Clean or replace the transfer belt. | |
| | 7 | Is there any abnormality of the transfer belt home position sensor? | Clean or replace the sensor. | |
| | 8 | The reflection tape is stained or damaged. | Clean or replace the transfer belt. | |
| | 9 | Are the couplings on the transfer belt side loosen, damaged or deformed? | Tighten the screws if they loosen, or replace the couplings. | |
| | 10 | Stain or damage of the drive roller | Clean or replace the drive roller. | |
| | 11 | Does the rib of the transfer belt overlap the collar on both edge of the drive roller? | Adjust the position of the transfer belt. | |
| | 12 | Is the belt edge damaged or stained? | Clean or replace the transfer belt. | |
| | 13 | Peeling of the cleaning blade (Large driving load) | Replace the cleaning blade. | |
| | 14 | Is the transfer belt unit installed normally? (Is the unit properly grounded?) | Check and correct the installing. | |

| Cause/Section | Step | Check Item | Measure | Remark |
|--------------------------|------|--|---|---|
| Laser optical unit | 15 | Check the grid pattern. Are the lines of the primary scanning direction warped? | Replace the laser optical unit. | F θ lens characteristic defect or reflection mirror warp |
| High-voltage transformer | 16 | Check the connection of the high-voltage supply terminal of the 1st or 2nd transfer rollers. | Correct or replace the terminal if it is loosened or damaged. | |

* If the desired image has not been obtained with the above measures or the more qualified image is needed, adjustment the "deviation amount" in the adjustment mode (05). (Refer to 3.5.2 Color deviation adjustment)

2) Uneven pitch and jitter image

<Symptoms>

| Original mode | Location | Phenomena |
|---------------|--|---|
| All modes | Occurs cyclically at right angles to paper feeding direction | Uneven pitch  <p style="text-align: center;">Feeding direction</p> <p style="text-align: center;">←</p> <p style="text-align: center;">Fig.5-2</p> |

| Cause/Section | Step | Check Item | Measure | Remark |
|--------------------------------------|------|---|---|--------------------------|
| | 1 | Test printing (A3/LD) | Output the built-in halftone and grid patterns. | For the following checks |
| Drum | 2 | Are there uneven pitches approx. 283 mm? | Replace the main motor. | |
| | 3 | Is there any damage on the drum surface? | Clean or replace the drum. | |
| Drum rotation abnormality | 4 | Check the main motor operation in the test mode (03) to see if there is any rotation abnormality of the drum. | Replace the main motor. | |
| | 5 | Check the main motor operation in the test mode (03) to see if there is any rotation abnormality of the drum. | Reconnect the connectors. Replace the harnesses. Replace the LGC board. | |
| Inadequate main motor rotation speed | 6 | Check the value set for main motor rotation speed. (Is the value significantly different from the default value?) | Reset main motor speed to 128. | |
| Drum coupling | 7 | Loose coupling, damage, deformation | Tighten the screws if they loosen. Or replace the couplings. | |

| Cause/Section | Step | Check Item | Measure | Remark |
|----------------------|-------------|--|--|---|
| Transfer belt | 8 | Is the belt tension of the driving unit normal? | Adjust the tension of the transfer belt. | Check the halftone pattern. (Uneven pitch: approx. 2.5 mm) |
| | 9 | Deformation or damage of the transfer belt | Replace the transfer belt. | Check the halftone pattern. (Uneven pitch: approx. 75 mm) |
| | 10 | Stain or damage of the drive roller | Clean or replace the drive roller. | Check the halftone pattern. (Uneven pitch: approx. 75 mm) |
| | 11 | Large driving load due to the peeling of the cleaning blade | Replace the cleaning blade. | |
| Laser optical unit | 12 | Check the halftone pattern to see if there are uneven pitches of approx. 0.3 mm each in the whole image. | Replace the laser optical unit. | Check the halftone pattern. (Uneven pitch: approx. 0.3 mm) |

3) Poor image density, color reproduction and gray balance

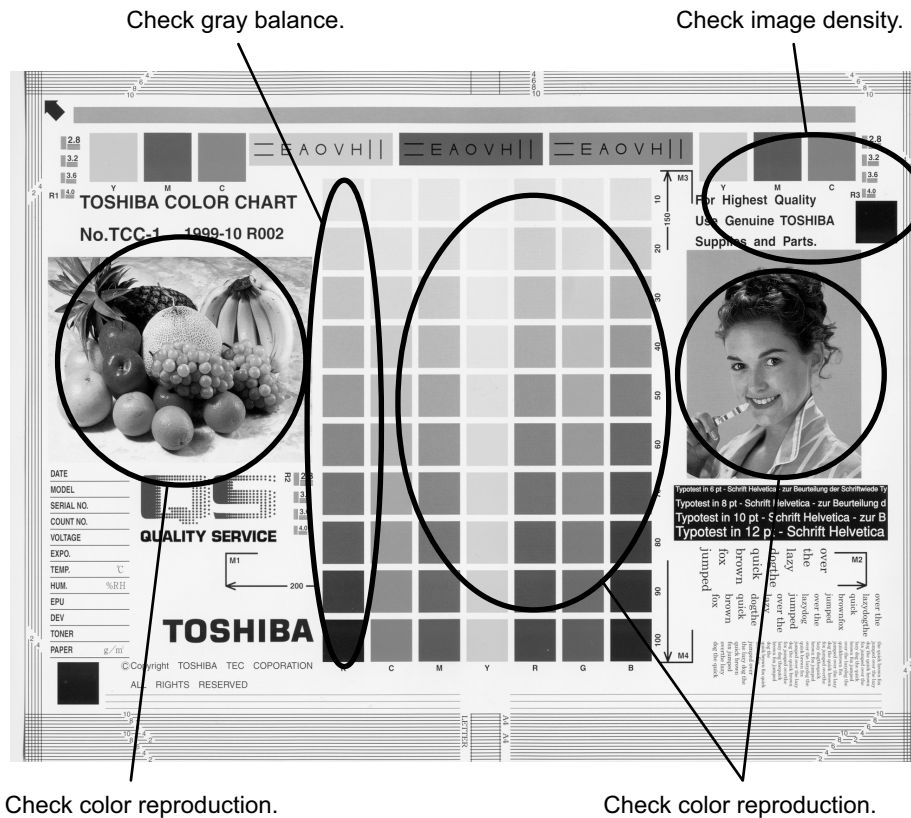


Fig.5-3

| Cause/Section | Step | Check items | Measures | Remarks |
|---|------|--|--|------------------------------|
| Density / Color reproduction / Gray balance | 1 | Check the image density / color reproduction / gray balance. | Perform the enforced performing of image quality closed-loop control (05-395) and then automatic gamma adjustment. | |
| Printer density | 2 | Check the density of printer output image. | Output the test patterns and check them. Color: using 04-231 for each color Black: using 04-113 | See step 5 if defect occurs. |
| Scanner | 3 | Check if the original glass, mirrors or lens is dirty. | Clean it. | |
| Parameter adjustment value | 4 | Check the image processing parameters. | Adjust the color balance (color). Adjust the image density. | |
| Printer output image abnormal | 5 | Is there any faded image (low density)? | Perform the troubleshooting procedures against the faded image. | |
| | | Is there any fog in the background? | Perform the troubleshooting procedures against the background fogging. | |
| | | Is there any blotch image? | Perform the troubleshooting procedures against the blotch image. | |
| | | Is there any poor transfer? | Perform the troubleshooting procedures against the poor transfer. | |
| | | Is there any poor cleaning of the transfer belt? (Check inside the equipment.) | Correct the transfer belt area. (Refer to Service Manual) | |

4) Background fogging

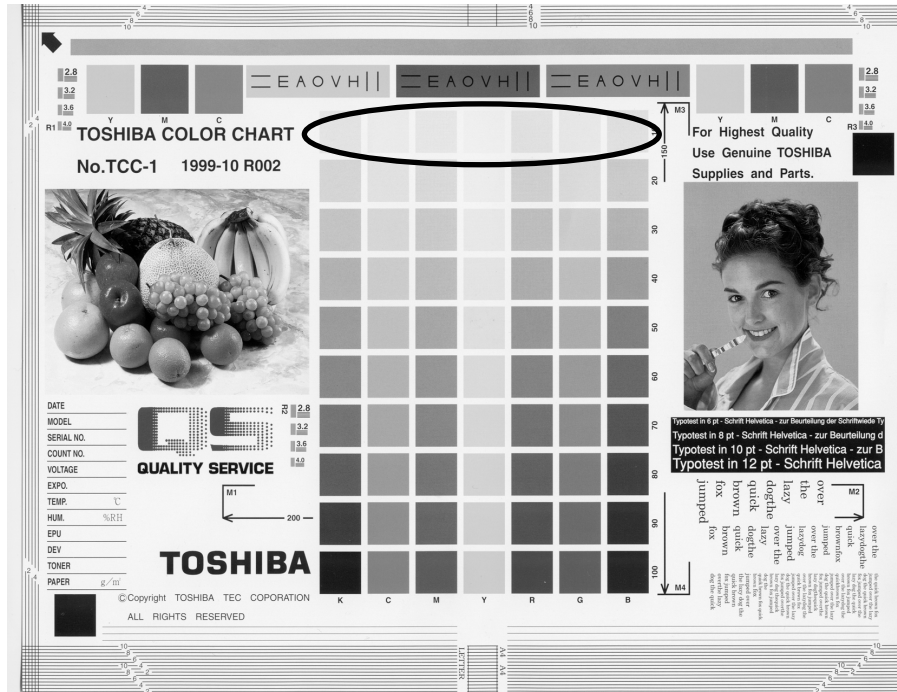


Fig.5-4

| Cause/Section | Step | Check items | Measures | Remarks |
|----------------------------|------|--|--|------------------------------|
| Density reproduction | 1 | Check the gradation reproduction. | Perform the forced performing of image quality closed-loop control (05-395) and then automatic gamma adjustment. | |
| Printer section | 2 | Check the printer output image. | Output the test patterns and check them. Color: using 04-231 for each color Black: using 04-113 | See step 6 if defects occur. |
| Scanner | 3 | Check if the original glass, mirrors or lens is dirty. | Clean it. | |
| Parameter adjustment value | 4 | Check the image processing parameters. | Check the value of offsetting adjustment for background processing (color), background adjustment (black) and background peak adjustment for range correction (black). | |
| | 5 | Adjust the image processing parameters. | While checking the above encircled image, adjust the reproduction level by the offsetting adjustment for background processing (color), background adjustment (black) and background peak adjustment for range correction (black). | |
| Cover | 6 | Is the cover installed properly? (Is the drum exposed to the external light?) | Correct it. | |
| Auto-toner | 7 | Is the auto-toner sensor normal? | Check the operation of autotoner sensor and readjust. | |
| | 8 | Is the toner supply operating constantly? | Check the motor and circuits. | |

| Cause/Section | Step | Check items | Measures | Remarks |
|-------------------------------|------|---|---|---------|
| Main charger output | 9 | Is the main charger output normal? | Check the circuits. | |
| Developer bias | 10 | Is the developer bias proper? | Check the circuits. | |
| Developer unit | 11 | Is the contact between the drum and developer material proper? | Check the doctor-to-sleeve gap and pole position. | |
| Developer material/Toner/Drum | 12 | Using the specified developer material, toner and drum? | Use the specified developer material, toner and drum. | |
| | 13 | Have the developer material and drum reached their PM life? | Replace the developer material and drum. | |
| | 14 | Is the storage environment of the toner cartridge 35°C or less without dew? | Use the toner cartridge stored in the environment within specification. | |
| Drum cleaning blade | 15 | Is the drum cleaned properly? | Check the drum cleaning blade pressure. | |
| Transfer belt cleaning blade | 16 | Is the transfer belt cleaning blade contacted and released properly? | Check if the spring of the transfer belt cleaner clutch is removed or if any connector is disconnected. Otherwise replace the clutch. | |
| | 17 | Is the transfer belt cleaning blade in proper contact with the transfer belt? | Check if the blade pressure spring is installed. | |
| Toner dusting | 18 | Is the toner accumulated on the seals of the developer unit? | Remove the toner and clean the seals. | |

* If the trouble is not solved at the step 1 and the step 2 or followings (excluding the parameter adjustment) are performed, make sure to perform “Enforced performing of image quality closed-loop control” and then “Automatic gamma adjustment” after taking a measure.

5) Moire/lack of sharpness

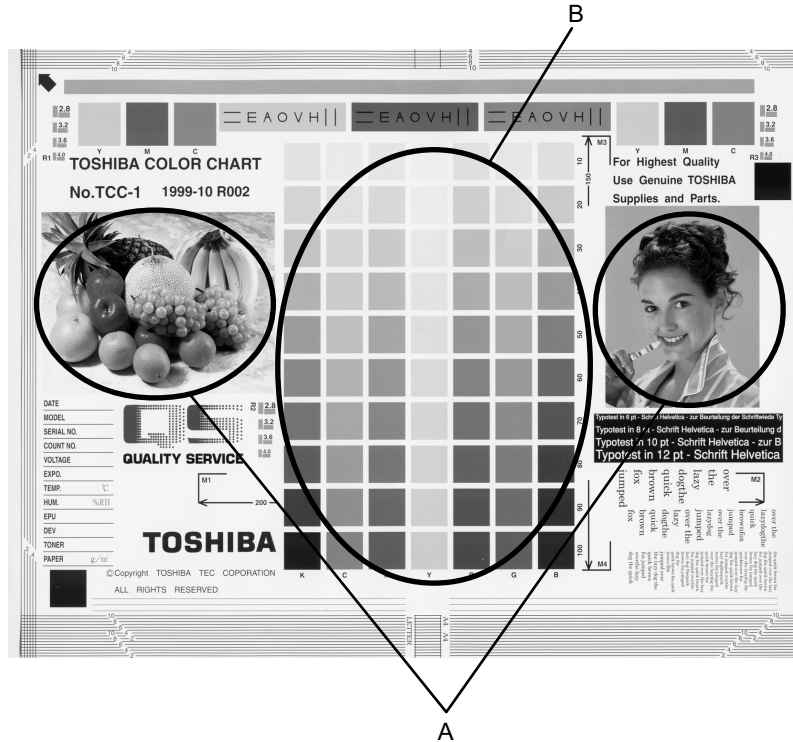


Fig.5-5

Moire

| Cause/Section | Step | Check items | Measures | Remarks |
|----------------------------|------|---|--|---|
| Density reproduction | 1 | Check the gradation reproduction. | Perform the forced performing of image quality closed-loop control (05-395) and then automatic gamma adjustment. | |
| Parameter adjustment value | 2 | Check the image processing parameters. | Check the sharpness adjustment value. | |
| | 3 | Adjust the image processing parameters. | While checking the above encircled images A and B, decrease moire by sharpness adjustment. | |
| Printer section | 4 | Check the printer output image. | Output the test patterns and check them. Color: using 04-231 for each color Black: using 04-113 | When defects occur, perform the corresponding troubleshooting procedures. |

Lack of sharpness

| Cause/Section | Step | Check items | Measures | Remarks |
|----------------------------|------|---|--|---------|
| Density reproduction | 1 | Check the gradation reproduction. | Perform the forced performing of image quality closed-loop control (05-395) and then automatic gamma adjustment. | |
| Parameter adjustment value | 2 | Check the image processing parameters. | Check the sharpness adjustment value. | |
| | 3 | Adjust the image processing parameters. | While checking the above encircled image A, increase sharpness by sharpness adjustment. | |

- * If the trouble is not solved at the step 1 and the step 2 or followings (excluding the parameter adjustment) are performed, make sure to perform “Enforced performing of image quality closed-loop control” and then “Automatic gamma adjustment” after taking a measure.

6) Toner offset

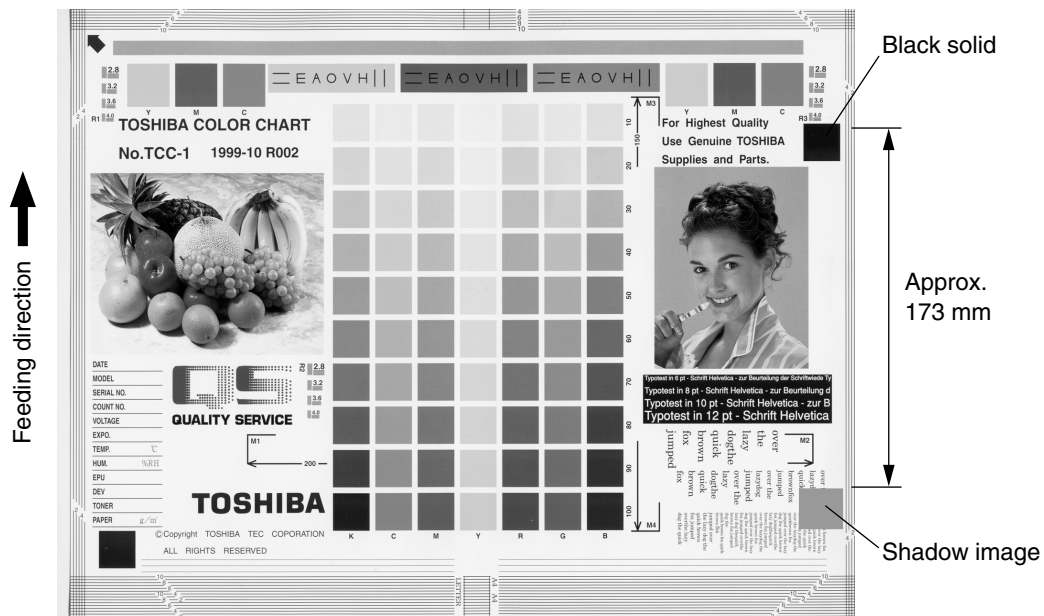


Fig.5-6

Toner offset (Shadow image appears approx. 173 mm behind the high density image.)

| Cause/Section | Step | Check items | Measures | Remarks |
|-----------------------|------|--|--|---|
| Fuser unit | 1 | Is the pressure between the fuser belt and pressure roller proper? | Check the pressure removal parts and pressure mechanism. | |
| | 2 | Is the thermostat in contact? | Establish its contact. | |
| | 3 | Is there scratch on the fuser belt or pressure roller surface? | Replace the fuser belt or the pressure roller. | |
| | 4 | Has the fuser belt or pressure roller reached its PM life? | Replace the fuser belt or the pressure roller. | |
| | 5 | Is the fuser roller temperature proper? | Check and correct the control circuit. | |
| Paper | 6 | Is the paper type corresponding to its mode? | Use the proper type of paper or select the proper mode. | |
| | 7 | Using recommended paper? | Use the recommended paper. | |
| Developer material | 8 | Is the specified developer used? | Use the specified developer and toner. | |
| Scanner | 9 | Are the mirrors, original glass or lens dirty? | Clean them. | |
| Image quality control | 10 | Is the control activated? | Check the image quality control related codes. | |
| Density | 11 | Is the density too high? | Perform the forced performing of image quality closed-loop control (05-395) and then automatic gamma adjustment. | |
| Printer density | 12 | Check the density of printer output image. | Output the test patterns and check them. Color: using 04-231 for each color Black: using 04-113 | When defects occur, perform the corresponding troubleshooting procedures. |

7) Blurred image

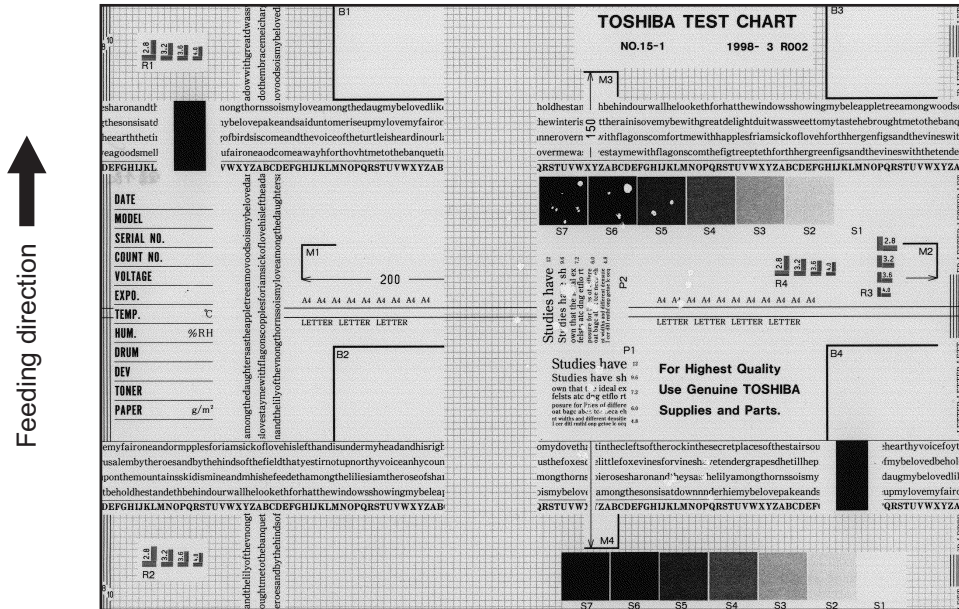


Fig.5-7

Toner offset (Shadow image appears approx. 173 mm behind the high density image.)

| Cause/Section | Step | Check items | Measures |
|---------------|------|--|--|
| Scanner | 1 | Is the scanner bedewed? | Clean it. |
| Drum | 2 | Is the drum bedewed or dirty? | Wipe the drum with dry cloth. * Be sure never use alcohol or other organic solvents because they have bad effect on the drum. |
| Ozone exhaust | 3 | Is the ozone exhaust fan operating properly? | Check the connection of the connector. |
| | 4 | Is the ozone filter stained or damaged? | Replace it. |

8) Poor fusing

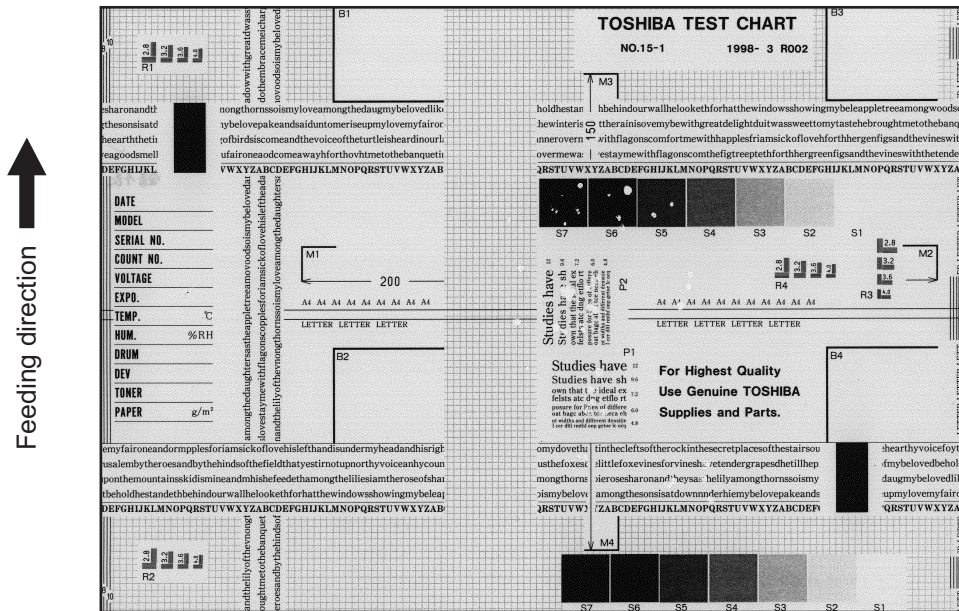


Fig.5-8

Toner offset (Shadow image appears approx. 173 mm behind the high density image.)

| Cause/Section | Step | Check items | Measures |
|--|------|--|---|
| IH electric power/control abnormal | 1 | Check if the connector contacts properly. | Correct it. |
| | 2 | Is the IH coil shorted or broken? Is the IH control board normal? | Replace the IH coil or IH control board. |
| | 3 | Are the connectors on the LGC board and joint connectors connected properly? | Reconnect them. |
| | 4 | Is the LGC board normal? | Replace the LGC board. |
| | 5 | Is the harness between the LGC board and IH board short circuited or open circuited? | Replace the harness. |
| Pressure between fuser belt and pressure roller improper | 6 | Are the pressure springs working properly? | Check/adjust the pressure springs. |
| Fuser roller temperature | 7 | Is the temperature of fuser roller too low? | Check/correct the setting value of fuser roller temperature. Clean or replace the thermistors. Check/correct the related circuit. |
| Developer material and toner | 8 | Using the specified developer material and toner? | Use the specified developer material and toner. |
| Paper | 9 | Is the paper damp? | Change the paper. |
| | 10 | Is the paper type corresponding to its mode? | Use the proper type of paper or select the proper mode. |
| | 11 | Using the recommended paper? | Use the recommended paper. |

9) Blank print



Fig.5-9

| Cause/Section | Step | Check items | Measures |
|--|------|--|--|
| High-voltage transformer (1st/2nd transfer roller and developer bias) | 1 | Is the high-voltage transformer output defective? | Adjust the output and correct the circuit, or replace the transformer. |
| | 2 | Are the connector of the high-voltage harness securely connected? Is the harness open circuited? | Reconnect the harness securely. Replace the high-voltage harness. |
| Developer unit | 3 | Is the developer unit installed securely? | Check/correct the developer sleeve coupling engaging. |
| | 4 | Do the developer sleeve and mixer rotate? | Check/correct the developer drive system. |
| | 5 | Is the developer material properly transported? | Remove foreign matter from the developer material, if any. |
| | 6 | Is there any magnetic brush phase error? | Check the developer pole position. |
| | 7 | Is the doctor sleeve gap incorrect? | Adjust the gap with the doctor-sleeve jig. |
| Drum | 8 | Is the drum rotating? | Check that the drum shaft is inserted. Check the drum drive system. |
| | 9 | Is the drum grounded? | Check the contact of the grounding plate. |
| Transfer unit | 10 | Is the transfer belt in proper contact with the drum? | Check if the contact releasing lever is at releasing position. Check the installation of the transfer belt. |
| | 11 | Is the transport of the transfer belt normal? | Check the installation of the transfer belt or transport mechanism. |
| | 12 | Is the releasing movement of the transfer belt cleaner is normal? (Does the cleaning blade stay in contact?) | Check the installation of the transfer belt cleaning blade. Check the operation of the transfer belt cleaner clutch. |
| | 13 | Is the 2nd transfer roller contacted and released properly? | Check the connection of the connector of 2nd transfer roller contact clutch and open circuit of harness. |

| Cause/Section | Step | Check items | Measures |
|--|-------------|---|--|
| Switching power supply | 14 | Is the power supply output (5.1VD) normal? | Replace the switching power supply. |
| Harnesses for SLG, SYS, LGC and LDR boards | 15 | Are the connectors securely connected? Is any harness between the boards open circuited? | Reconnect the connectors securely. Replace the harness. |
| Laser optical unit | 16 | Was the protection seal of slit removed when replacing the unit? | Remove the protection seal. |

10)Solid print

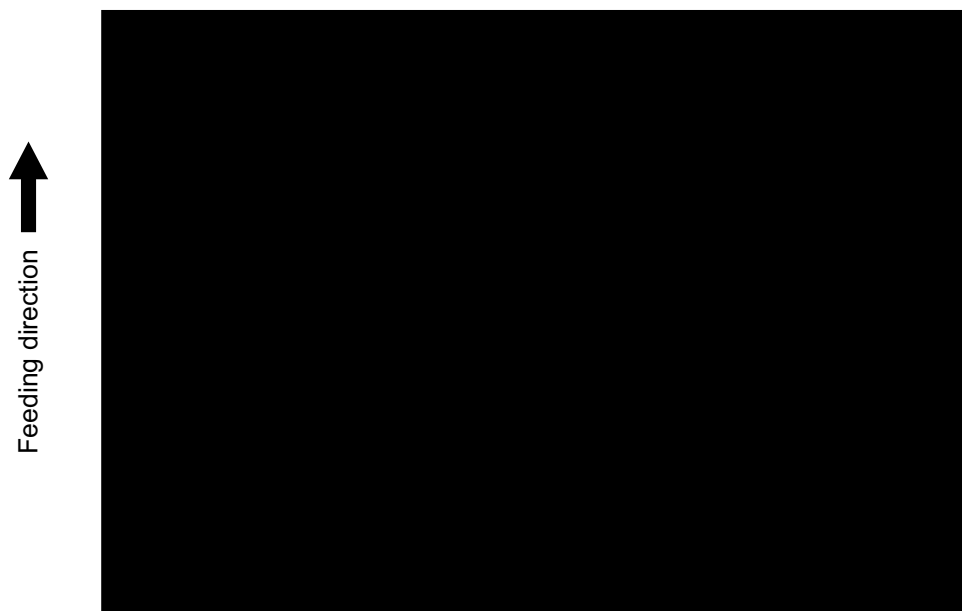


Fig.5-10

| Cause/Section | Step | Check items | Measures |
|---|------|---|--|
| Exposure lamp Inverter | 1 | Does the exposure lamp light? | Check the contact of the inverter connector. If the inverter does not work, replace it. If the lamp does not work, replace it. |
| Main charger | 2 | Is the main charger securely installed? | Reinstall it securely. |
| | 3 | Is the main charger wire open circuited? | Replace it. |
| High-voltage transformer (main charger wire/grid bias) | 4 | Is the high-voltage transformer output defective? | Adjust the output and correct the circuit, or replace the high-voltage transformer. |
| | 5 | Are the connector of the high-voltage harness securely connected? Is the harness open circuited? | Reconnect the harness securely. Replace the high-voltage harness. |
| Harnesses for SLG, SYS and LGC boards | 6 | Are the connectors securely connected? Is any harness between the boards open circuited? | Reconnect the connectors securely. Replace the harness. |
| Scanner | 7 | Is there foreign matter in the optical path? | Remove it. |
| Bedewing of scanner and drum | 8 | Is the scanner or the drum bedewed? | Clean the mirrors, lens and drum. Keep the power cord plugged so that the damp heater can work. |

11) White banding (in feeding direction)

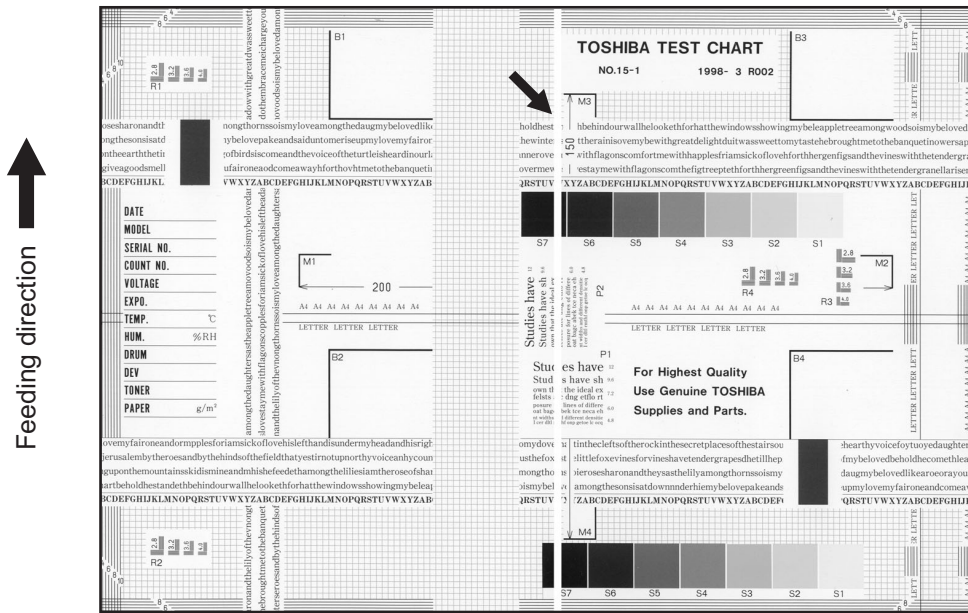


Fig.5-11

| Cause/Section | Step | Check items | Measures |
|--------------------|------|---|---|
| Laser optical unit | 1 | Is there foreign matter or dust on the slit glass? | Clean the slit glass. |
| Main charger grid | 2 | Is there foreign matter on the charger grid? | Remove foreign matter. |
| Developer unit | 3 | Is there foreign matter inside the doctor blade? | Remove foreign matter. |
| | 4 | Is there foreign matter on the drum seal? | Remove foreign matter. |
| | 5 | Is the drum seal of developer unit in proper contact with the drum? | Modify the position of drum seal or replace it. |
| Drum | 6 | Is there scratch or foreign matter on the drum surface? | Replace the drum. |
| Transfer unit | 7 | Is there scratch or foreign matter on the transfer belt surface? | Replace the transfer belt. |
| | 8 | Are the harness or foreign matters in contact with the transfer belt surface? | Correct or remove them. |
| | 9 | Is the transfer belt cleaning blade contacted and released properly? | Check if the spring of the transfer belt cleaner clutch is removed or if any connector is disconnected. Otherwise replace the clutch. |
| | 10 | Is the transfer belt cleaning blade in proper contact with the transfer belt? | Check if the blade pressure spring is installed. |
| | 11 | Is there any scratch or hole on the 1st/2nd transfer roller? | Replace the 1st/2nd transfer roller. |
| Transport path | 12 | Does the toner image touch foreign matter after transfer, before entering the fuser unit? | Remove foreign matter. |
| Discharge lamp | 13 | Has any LED of discharge lamp gone out? | Replace the discharge lamp. |
| Scanner | 14 | Is there foreign matter or dust in the optical path? | Clean the lens and mirrors. |

12) White banding (at right angles to feeding direction)

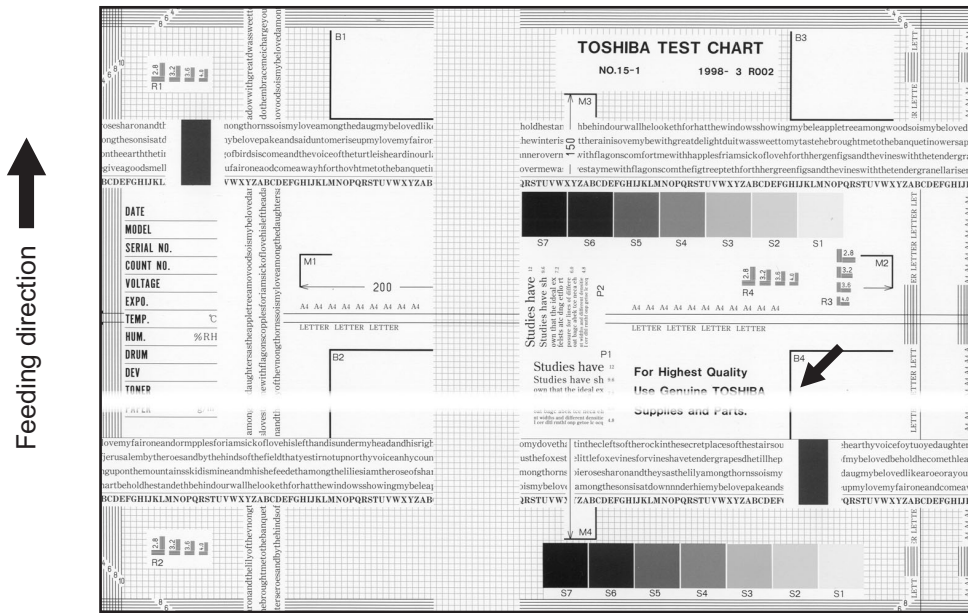


Fig.5-12

| Cause/Section | Step | Check items | Measures |
|---|------|--|--|
| Main charger | 1 | Is there foreign matter on the charger? | Remove foreign matter. |
| | 2 | Is the terminal contact poor? | Clean or adjust the terminals. |
| Drum | 3 | Is there any abnormalities on the drum surface? | Replace the drum. |
| | 4 | Is the drum grounded? | Check the contact of the grounding plate. |
| Discharge lamp | 5 | Is the discharge lamp lighting properly? | Replace the discharge lamp or clean terminals. |
| Developer unit | 6 | Is the developer sleeve rotating correctly? Is there any abnormalities on the sleeve surface? | Check the developer drive system, or clean the sleeve surface. |
| | 7 | Is the connection of developer bias supply terminal normal? | Correct it. |
| Drive systems | 8 | Is the drum, scanner or transfer belt jittery? | Check each drive system. |
| High-voltage transformer (main charger wire/grid, 1st/2nd transfer roller and developer bias) | 9 | Is the high-voltage transformer output defective? | Check/correct any electric leakage and related circuits. If the high-voltage transformer does not work, replace it. |

13)Skew (slantwise copying)

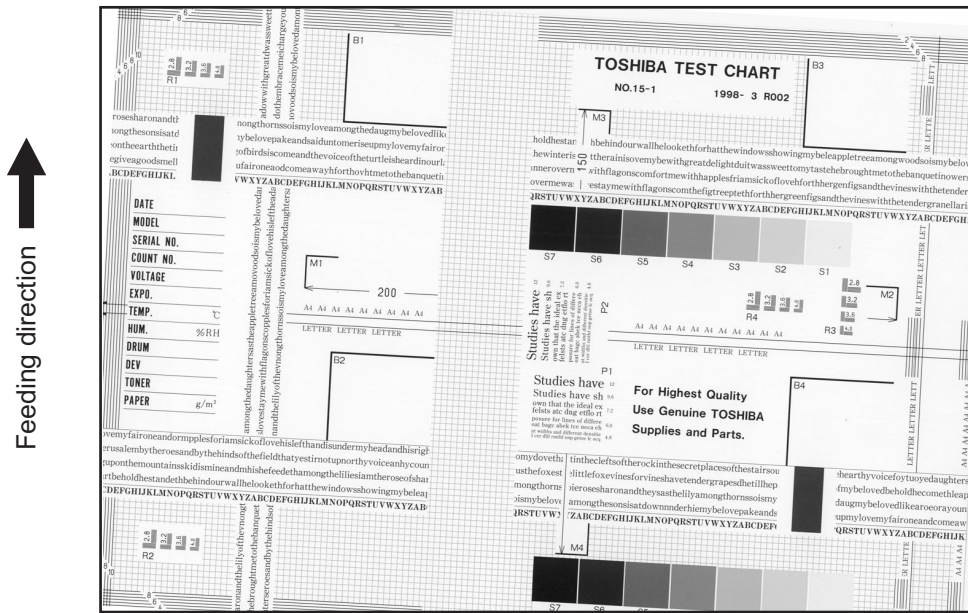


Fig.5-13

| Cause/Section | Step | Check items | Measures |
|--------------------------|------|---|---|
| Drawer/LCF | 1 | Is the drawer or LCF properly installed? | Reinstall the drawer or LCF properly. |
| | 2 | Is too much paper loaded in the drawer or LCF? | Reduce paper to 550 sheets or less. (2500 sheets or less/stack for LCF) |
| | 3 | Is the paper corner folded? | Change the paper direction and reinsert it. |
| | 4 | Are the drawer or LCF side guides properly set? | Adjust the side guides. |
| Paper feed roller | 5 | Is the surface of paper feed roller dirty? | Clean the roller surface with alcohol, or replace the roller. |
| Rollers | 6 | Is each roller improperly fixed to the shaft? | Check and reinstall E-rings, pins, clips and setscrews. |
| Aligning amount | 7 | Is the aligning amount proper? | Increase the aligning amount. |
| Registration roller | 8 | Is the registration roller spring removed? | Mount the spring correctly. Clean the roller if it is dirty. |
| Pre-registration guide | 9 | Is the pre-registration guide improperly installed? | Correct it. |
| 2nd transfer front guide | 10 | Is the 2nd transfer front guide installed properly? | Correct it. |
| RADF | 11 | Is the RADF installed and adjusted properly? | Reinstall and readjust it. |

14) Color banding (in feeding direction)

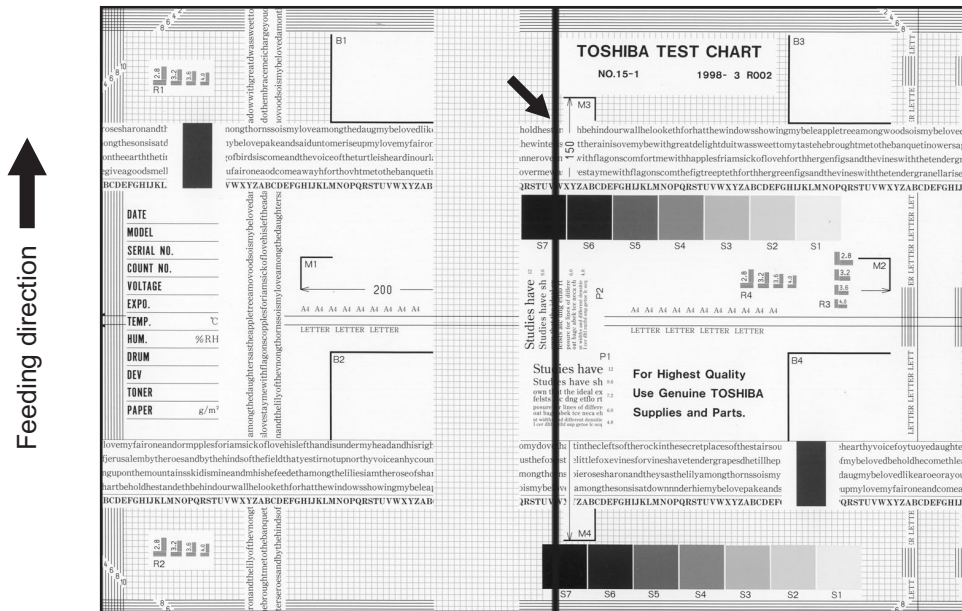


Fig.5-14

| Cause/Section | Step | Check items | Measures |
|---------------|------|---|---|
| Scanner | 1 | Is there foreign matter in the optical path? | Clean the slit, lens and mirrors. |
| | 2 | Is there dust or stain on the shading correction plate or ADF original glass? | Clean it. |
| Main charger | 3 | Is there foreign matter on the charger grid? | Remove foreign matter. |
| | 4 | Is the charger grid dirty or deformed? | Clean or replace the charger grid. |
| | 5 | Is there foreign matter on the main charger? | Remove foreign matter. |
| | 6 | Is the charger wire dirty or deformed? | Clean or replace the charger wire. |
| | 7 | Is there foreign matter inside the charger case? | Remove foreign matter. |
| | 8 | Is the inner surface of charger case dirty? | Clean inside. |
| | 9 | Are the pads of charger wire cleaner stopping at the position other than their home position? | Correct the position. |
| Cleaner | 10 | Is there paper dust on the cleaning blade edge? | Clean or replace the paper dust removal brush for the registration roller. Clean or replace the cleaning blade. |
| | 11 | Is the cleaning blade contact improper? | Correct it. |
| | 12 | Is toner recovery defective? | Clean the toner recovery auger section. |
| Transfer unit | 13 | Are the harness or foreign matters in contact with the transfer belt surface? | Correct or remove them. |
| | 14 | Is there paper dust on the edge of transfer belt cleaning blade? | Clean or replace it. |
| | 15 | Is the transfer belt cleaning blade contacted and released properly? | Check if the spring of the transfer belt cleaner clutch is removed or if any connector is disconnected. Otherwise replace the clutch. |
| | 16 | Is the transfer belt cleaning blade in proper contact with the transfer belt? | Check if the blade pressure spring is installed. |

| Cause/Section | Step | Check items | Measures |
|----------------------|-------------|---|---|
| Fuser unit | 17 | a. Is there dirt or scratches on the fuser belt and pressure roller surface? b. Is the thermistor dirty? | a. Clean or replace them. b. Clean the thermistor. |
| Drum | 18 | Are there scratches on the drum surface? | Replace the drum. |
| Laser optical unit | 19 | Is there foreign matter or dust on the slit glass? | Remove foreign matter or dust. |

15)Color banding (at right angles to feeding direction)

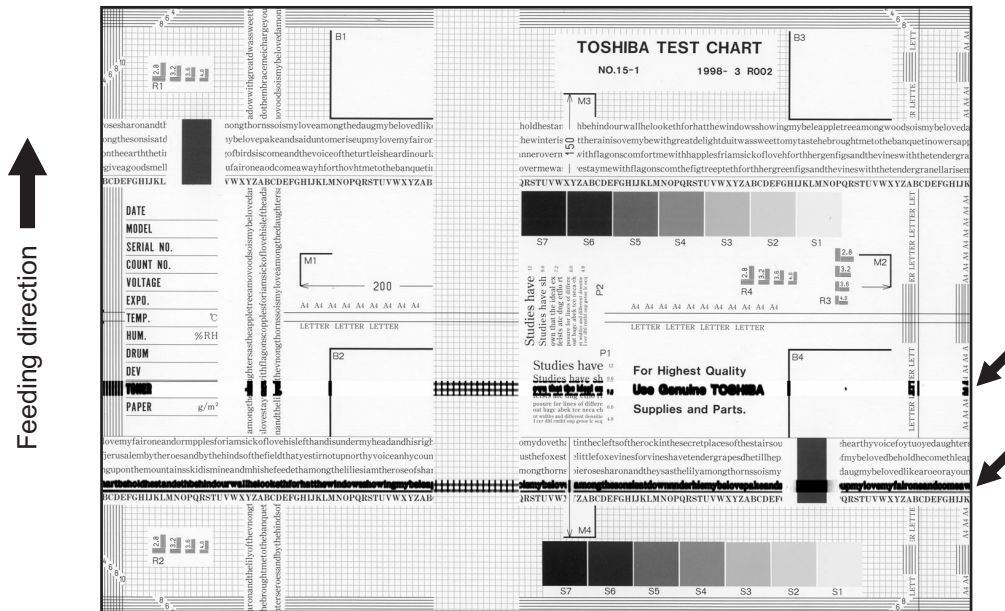


Fig.5-15

| Cause/Section | Step | Check items | Measures |
|--|------|--|--|
| Main charger | 1 | Is the charger wire dirty or deformed? | Clean or replace the charger wire. |
| Fuser unit | 2 | Is the fuser belt, pressure roller or oil roller dirty? | Clean them. |
| High-voltage transformer (main charger wire/grid and transfer roller bias) | 3 | Is the high-voltage transformer output defective? | Check the circuit and replace the high-voltage transformer if not working. |
| | 4 | Is each joint of high-voltage output loosened? (Check if any electric leakage is causing noise.) | Reconnect each joint. |
| Drum | 5 | Is there deep scratch on the drum surface? | Replace the drum, especially if the scratch has reached the aluminum base. |
| | 6 | Are there fine scratches on the drum surface (drum pitting)? | Check and correct the contact of cleaning blade and recovery blade. |
| | 7 | Is the drum grounded? | Check the contact of the grounding plate. |
| 2nd transfer roller | 8 | Is the 2nd transfer roller rotating normally? | Clean the roller area or replace the roller. |
| Scanner | 9 | Is there foreign matter on the carriage rail? | Remove foreign matter. |

16)White spots



Fig.5-16

| Cause/Section | Step | Check items | Measures |
|---|------|---|---|
| Developer unit/ Toner cartridge | 1 | Is the toner density of developer material proper? | Check and correct the auto-toner sensor and toner supply operation. Check if the amount of toner is sufficient in the toner cartridge. |
| | 2 | Is the doctor-sleeve gap proper? | Adjust the gap. |
| Developer material/ Toner/Drum | 3 | Using the specified developer material, toner and drum? | Use the specified developer material, toner and drum. |
| | 4 | Have the developer material and drum reached their PM life? | Replace the developer material and drum. |
| | 5 | Is the storage environment of the toner cartridge 35oC or less without dew? | Use the toner cartridge stored in the environment within specification. |
| | 6 | Is there any dent on the surface of the drum? | Replace the drum. |
| | 7 | Is there any film forming on the drum? | Clean or replace the drum. |
| | 8 | Is the drum bedewed? | Wipe the drum surface with a piece of dry cloth. |
| Transfer unit | 9 | Is there foreign matter on the transfer belt surface? | Remove foreign matter. |
| | 10 | Is there foreign matter on the transfer belt drive roller? | Clean the transfer belt unit. |
| Main charger | 11 | Is there foreign matter on the charger? | Remove it. |
| | 12 | Is the charger wire dirty or deformed? | Clean or replace the charger wire. |
| High-voltage transformer (main charger wire/grid, developer 1st/2nd transfer roller bias) | 13 | Is the high-voltage transformer output defective? | Adjust the output. |
| Paper | 14 | Is the paper type corresponding to its mode? | Use the proper type of paper or select the proper mode. |

17) Poor transfer

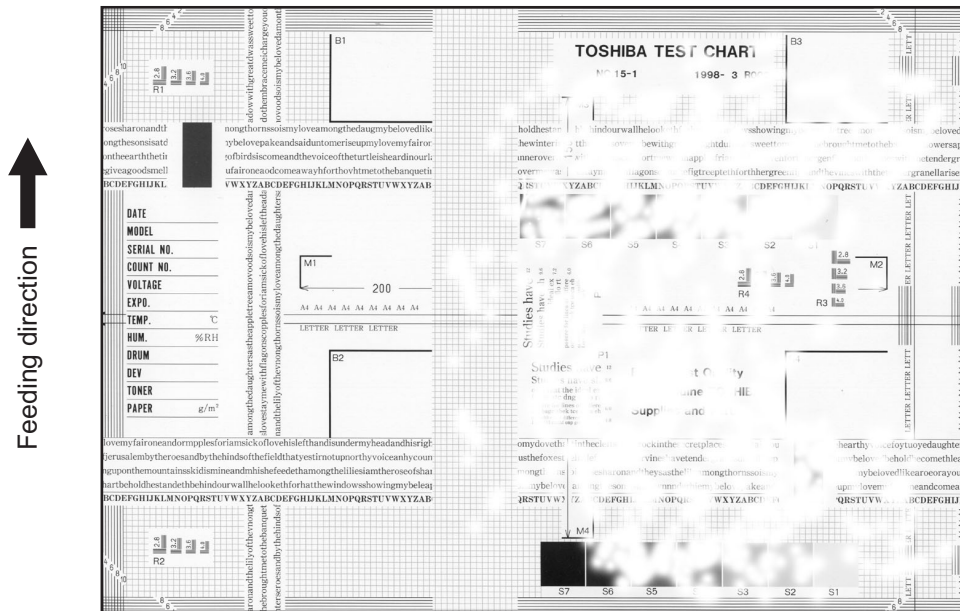


Fig.5-17

| Cause/Section | Step | Check items | Measures |
|---|------|--|--|
| Transfer unit | 1 | Is the transfer belt or 1st/2nd transfer rollers dirty? | Clean it. |
| | 2 | Is the transfer belt in proper contact with the drum ? | Correct it. |
| | 3 | Is the 2nd transfer roller in proper contact with the transfer belt? | Correct it. |
| | 4 | Is there any deformation or abnormalities on the transfer belt? | Replace the belt. |
| | 5 | Is the high-voltage fed to the 2nd transfer roller correctly? | If any contact failure occurs in the feeding area (e.g. the conductive bushing and spring come off), correct it. |
| Paper | 6 | Is paper in the drawer or LCF curled? | Reinsert paper with reverse side up or change paper. |
| | 7 | Is paper in the drawer or LCF damp? | Change paper. * Avoid storing paper in damp place. |
| Registration roller | 8 | Is the registration roller malfunctioning? | Clean the roller, remount the spring, or replace defective clutch-related parts. |
| Aligning amount | 9 | Is the aligning amount proper? | Inckease the aligning amount |
| High-voltage transformer (1st/2nd transfer roller bias) | 10 | Is the high-voltage transformer output defective? | Check the circuit and adjust the transformer output. |
| | 11 | Are the high-voltage harness and terminals in proper contact? | Correct them if loosened. |

18) Uneven image density

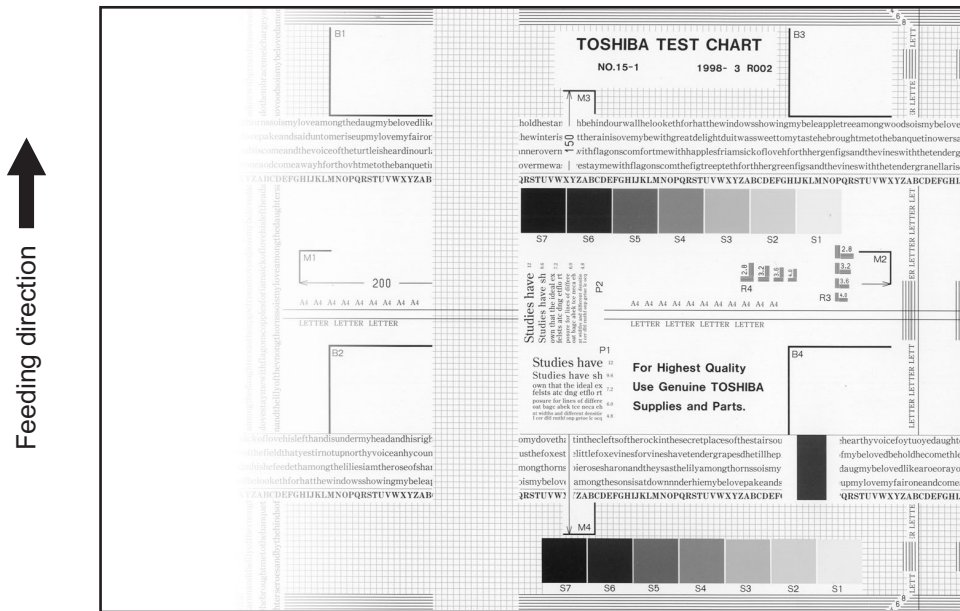


Fig.5-18

| Cause/Section | Step | Check items | Measures |
|--------------------|------|---|--|
| Main charger | 1 | Is the main charger dirty? | Clean it or replace the charger wire. |
| Transfer unit | 2 | Is the transfer belt or 1st/2nd transfer rollers dirty? | Clean the belt. |
| | 3 | Is the transfer belt in proper contact with the drum? | Correct it. |
| | 4 | Is 2nd transfer roller in proper contact with the transfer belt? (Is the roller tilted?) | Correct it. |
| | 5 | Is there any abnormalities or deformation on the transfer belt? | Replace the transfer belt. |
| Laser optical unit | 6 | Is there foreign matter or dust on the slit glass? | Clean the slit glass. |
| Discharge lamp | 7 | Is the discharge lamp dirty? | Clean it. |
| | 8 | Has any LED of discharge lamp gone out? | Replace it. |
| Developer unit | 9 | Is the magnetic brush in proper contact with the drum? | Adjust the doctor-sleeve gap. |
| | 10 | Is the developer unit pressure mechanism malfunctioning? | Check the mechanism. |
| | 11 | Is the transport of developer material poor? | Remove foreign matter if any. |
| Scanner section | 12 | a. Is the platen cover or RADF open? b. Is the original glass, mirrors, or lens dirty? | a. Close the platen cover or RADF. b. Clean them. |

19) Faded image (low density)

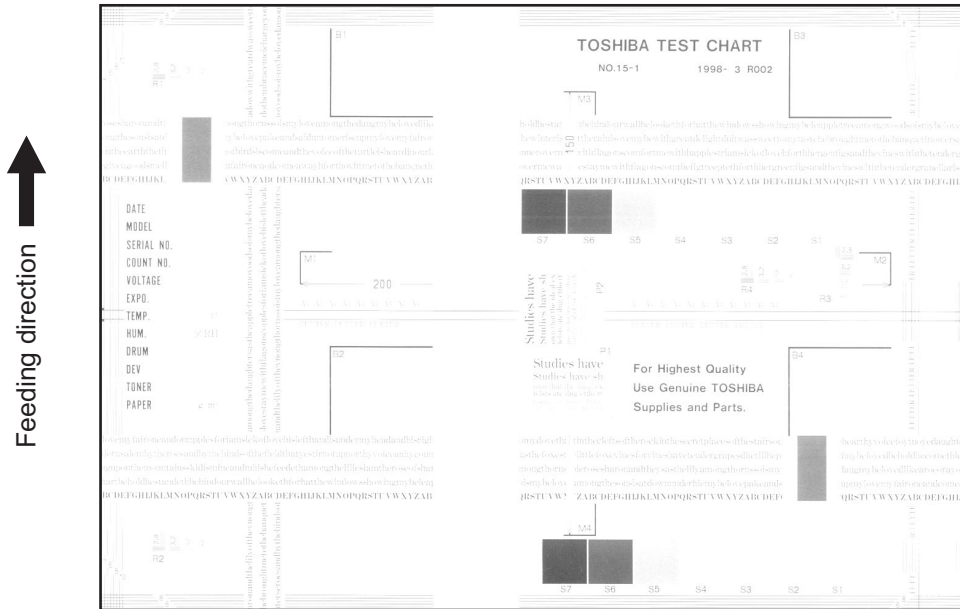


Fig.5-19

| Cause/Section | Step | Check items | Measures |
|--|------|--|---|
| Toner empty Auto-toner circuit | 1 | Is the "ADD TONER" symbol blinking? | Replace the toner cartridge. |
| | 2 | Is there enough toner in the cartridge? | Check the auto-toner circuit function. |
| | 3 | Is the toner density of developer material too low? | |
| Toner motor | 4 | Is the toner motor malfunctioning? | Check the motor drive circuit. |
| Toner cartridge | 5 | Are there any abnormalities in the toner cartridge? | Replace the toner cartridge. |
| Developer material | 6 | Has the developer material reached its PM life? | Replace developer material. |
| Developer unit | 7 | Is the magnetic brush in proper contact with the drum? | Check the developer unit installation. Check the doctor-sleeve gap and pole position. |
| Main charger | 8 | Is the main charger dirty? | Clean it or replace the charger wire. |
| Drum | 9 | Is there film forming on the drum surface? | Clean or replace the drum. |
| | 10 | Has the drum reached its PM life? | Replace the drum. |
| Transfer unit | 11 | Has the transfer belt, 1st or 2nd transfer roller reached its PM life? | Replace the transfer belt, 1st or 2nd transfer roller. |
| High-voltage transformer (developer bias) | 12 | Is the high-voltage transformer output settings improper? | Adjust the high-voltage transformer output. |
| | 13 | Are the connector of the high-voltage harness securely connected? Is the harness open circuited? | Reconnect the harness securely. Replace the high-voltage harness. |

20) Image dislocation in feeding directio

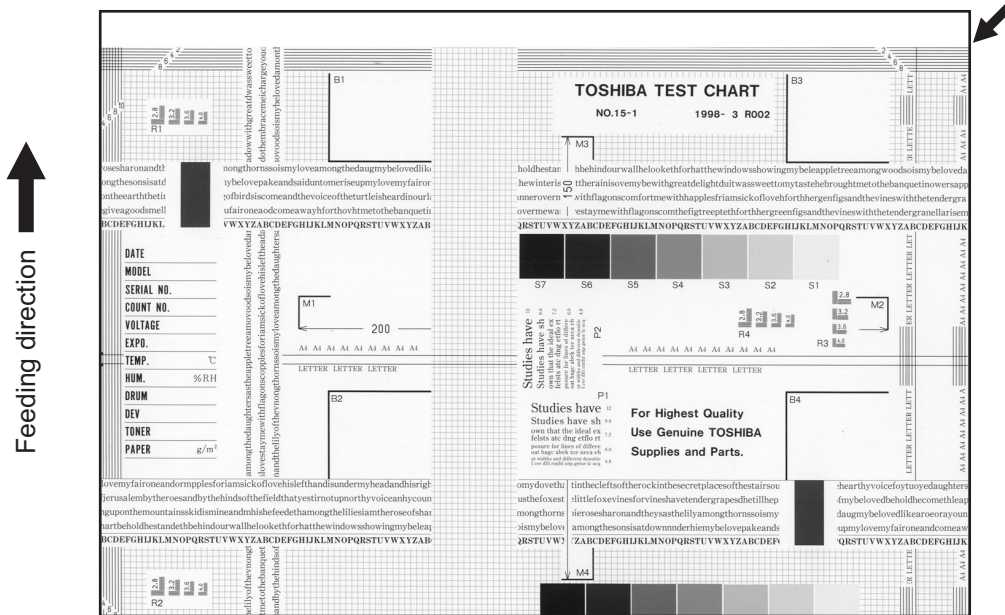


Fig.5-20

| Cause/Section | Step | Check items | Measures |
|--|------|--|---|
| Adjustment error of scanner or printer section | 1 | Is same dislocation on every copy? | Adjust the scanner/printer using the Adjustment Mode. |
| Registration roller | 2 | Is the registration roller dirty, or is the spring removed? | Clean the roller with alcohol. Reinstall the spring. |
| | 3 | Is the registration motor malfunctioning? | Adjust or replace the gears, etc. if they are not engaged properly. |
| | 4 | Is the registration roller clutch operating normally? (Is the timing of operation delaying?) | Replace the registration roller clutch. |
| Paper feed clutch, Transport clutch | 5 | Are the paper feed clutch and transport clutch malfunctioning? | Check the circuit or the clutch and replace them if necessary. |
| Aligning amount | 6 | Is the aligning amount proper? | Decrease the aligning amount. |
| Pre-registration guide | 7 | Is the pre-registration guide improperly installed? | Reinstall the guide. |
| Transfer belt | 8 | Is there any stain or scratch on the reflection tape? | Clean or replace it. |
| | 9 | Is the lens of the transfer belt home position sensor stained? | Clean or replace it. |

21) Image jittering

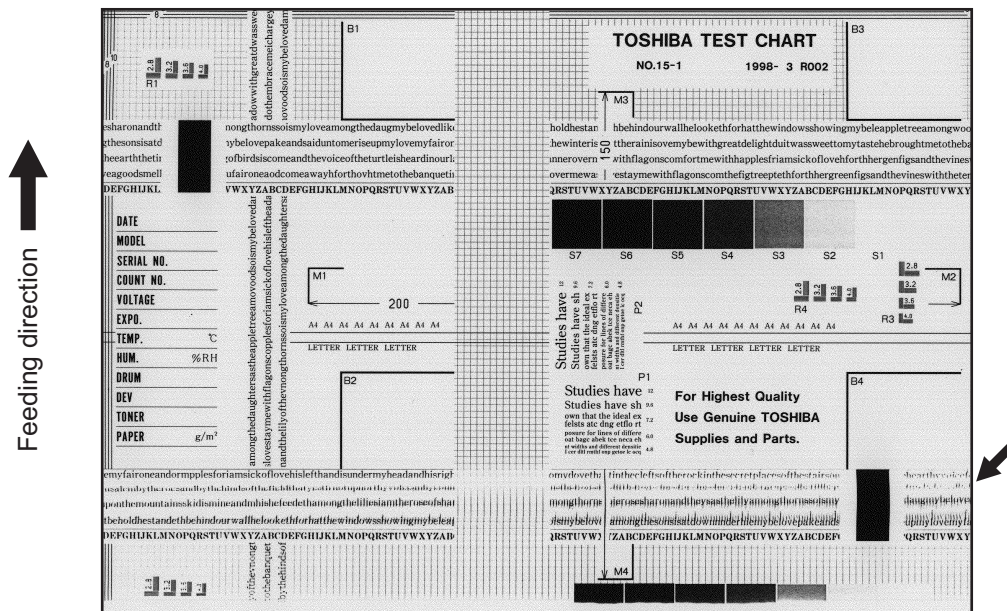


Fig.5-21

| Cause/Section | Step | Check items | Measures |
|---------------------|------|---|---|
| - | 1 | Is the toner image on the drum proper? | If proper, perform step 1 to 3; otherwise perform step 4 and after. |
| Registration roller | 2 | Is the registration roller rotating normally? | Check the registration roller section and its springs. |
| Transfer unit | 3 | Is the transfer belt or 2nd transfer roller operating normally? | Check the drive system and replace the transfer belt or 2nd transfer roller if necessary. |
| Fuser unit | 4 | Are the fuser roller and pressure roller rotation proper? Is the fuser belt transportation proper? | Check the drive system. Replace the fuser belt, fuser roller and pressure roller if necessary. |
| Drum | 5 | Is there large scratch on the drum? | Replace the drum. |
| Scanner | 6 | Is the slide sheet defective? | Replace it. |
| | 7 | Are there any abnormalities on the carriage feet? | Replace the feet. |
| | 8 | Is the tension of timing belt inappropriate? | Correct the tension. |
| | 9 | Is the carriage drive system malfunctioning? | Check the carriage drive system. |
| | 10 | Are any mirrors loosely installed? | Install them properly. |
| Drum drive system | 11 | Is the drum drive system malfunctioning? | Check the drum drive system. Clean or replace the belts, pulleys, bushings if they have dirt or scratches. |

22) Poor cleaning

Note:

Poor cleaning may occur in feeding direction.

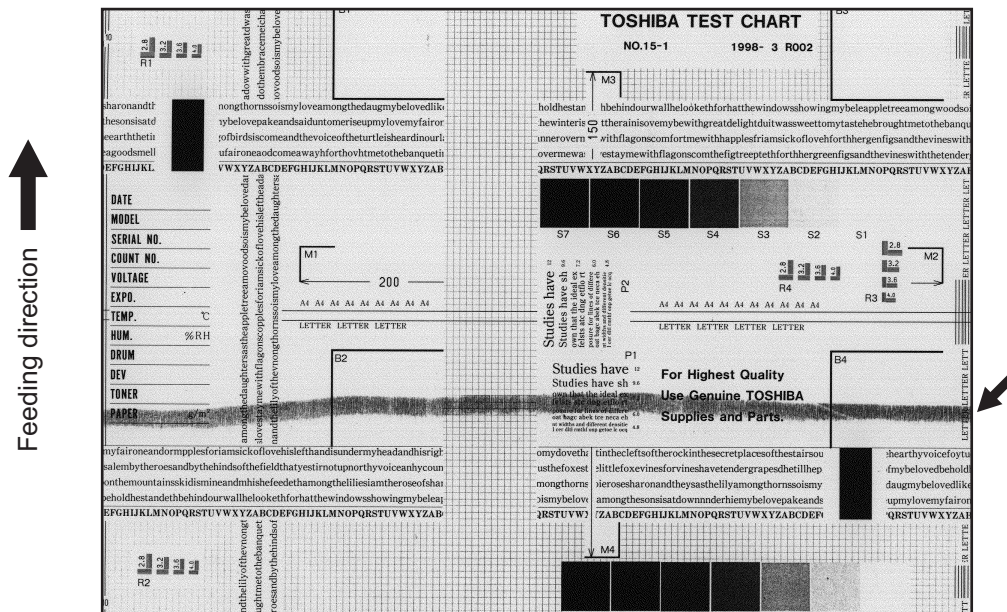


Fig.5-22

| Cause/Section | Step | Check items | Measures |
|-----------------------|------|---|---|
| Developer material | 1 | Is the specified developer material used? | Use the specified developer material and toner. |
| Cleaner | 2 | Is there paper dust on the drum cleaning blade edge? | Clean it. |
| | 3 | Is the drum cleaning blade peeled? | Replace the blade. Check and replace the drum. |
| | 4 | Is the cleaning brush rotating normally? | Check the brush driving section. Clean the brush area. |
| | 5 | Is the cleaning brush damaged? Is there foreign matter on the brush? | Replace the brush and clean the brush area. Check the drum and replace if there is any abnormality. |
| | 6 | Is there paper dust on the edge of transfer belt cleaning blade? | Clean or replace it. |
| Transfer belt cleaner | 7 | Is the transfer belt cleaning blade peeled? | Replace the blade. |
| | 8 | Is the transfer belt cleaning blade contacted and released properly? | Check if the spring of the transfer belt cleaner clutch is removed or if any connector is disconnected. Otherwise replace the clutch. |
| | 9 | Is the transfer belt cleaning blade in proper contact with the transfer belt? | Check if the blade pressure spring is installed. |
| Toner recovery auger | 10 | Is the toner recovery defective? | Clean the toner recovery auger. Check the cleaning blade pressure. |

| Cause/Section | Step | Check items | Measures |
|----------------------|-------------|---|---|
| Fuser unit | 11 | Is the cleaning roller or the oil roller damaged? Have the roller reached their PM life? | Replace them. |
| | 12 | Is there any bubble-like defect on the fuser belt (173 mm pitch on the image)? | Replace the fuser belt. Check and modify the heater control circuit. |
| | 13 | Have the fuser belt and pressure roller reached their PM life? | Replace them. |
| | 14 | Is the pressure between the fuser belt and pressure roller proper? | Check and adjust the pressure mechanism. |
| | 15 | Is the temperature of fuser roller proper? | Check/correct the setting value of fuser roller temperature. Clean or replace the thermistors. Check and correct the circuit. |

23) Uneven light distribution

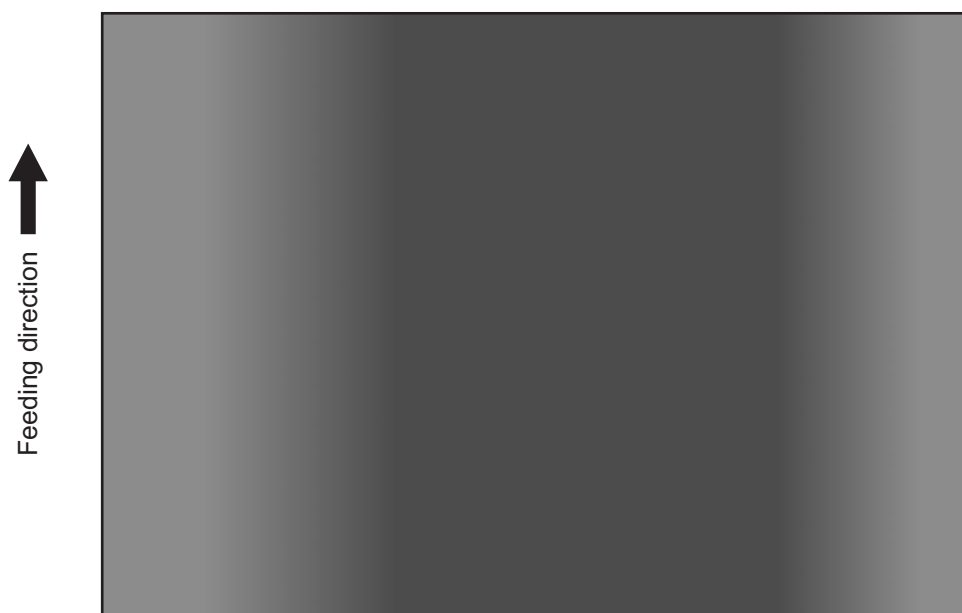


Fig.5-23

| Cause/Section | Step | Check items | Measures |
|----------------|------|--|--|
| Original glass | 1 | Is the original glass dirty? | Clean the glass. |
| Main charger | 2 | Are the main charger wire, grid and case dirty? | Clean or replace them. |
| Discharge lamp | 3 | Is the discharge lamp dirty? | Clean it. |
| Scanner | 4 | Are the reflector, exposure lamp, mirrors, lens, etc. dirty? | Clean them. |
| Exposure lamp | 5 | Is the exposure lamp tilted? | Adjust the installed position of the lamp. |
| | 6 | Is the lamp discolored or degraded? | Replace it. |

24) Blotched image

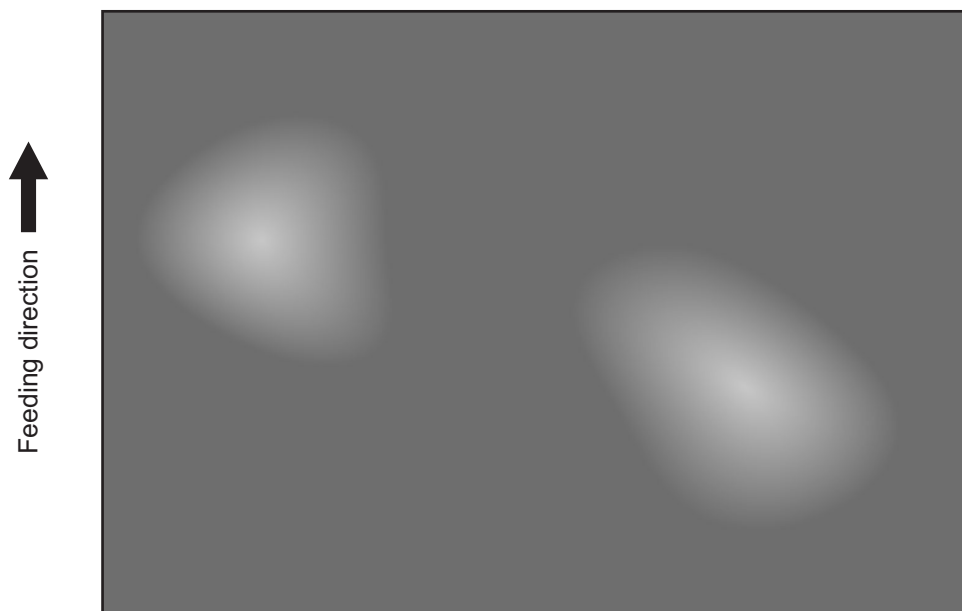


Fig.5-24

| Cause/Section | Step | Check items | Measures |
|---|------|--|---|
| Paper | 1 | Is the paper type corresponding to its mode? | Check the paper type and mode. |
| | 2 | Is paper too dry? | Change paper. |
| Transfer unit | 3 | Is the transfer belt in proper contact with the drum? | Correct it. |
| | 4 | Is the 2nd transfer roller in proper contact with the transfer belt? | Correct it. |
| | 5 | Are there any abnormalities on the transfer belt? | Clean or replace the transfer belt. |
| High-voltage transformer (1st/2nd transfer roller bias) | 6 | Is the high-voltage transformer output abnormal? | Adjust the output. Replace the transformer, if necessary. |

25) Stain on the paper back side

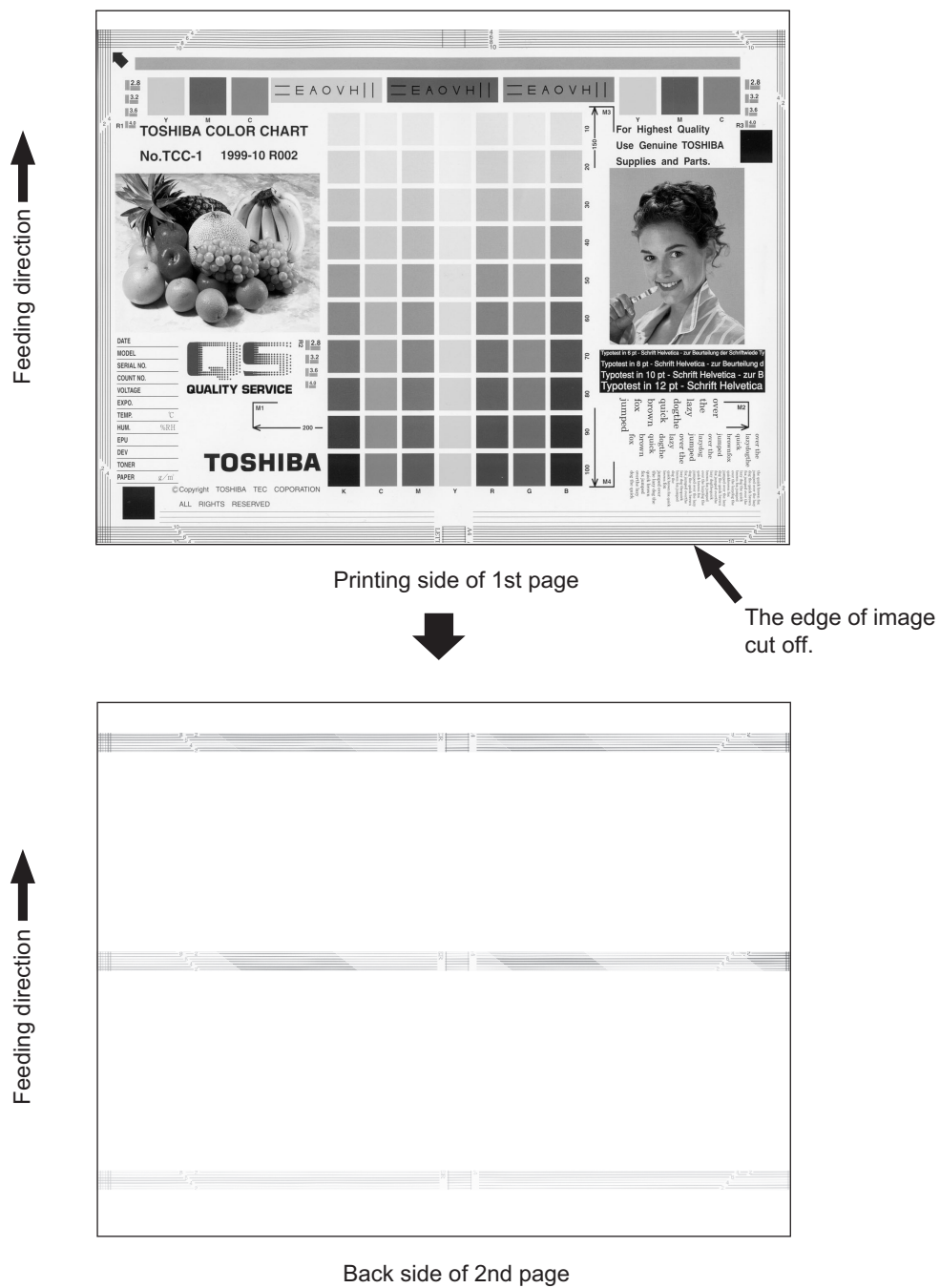


Fig.5-25

| Cause/Section | Step | Check items | Measures |
|--------------------------------|------|--|---|
| Image adjustment/setting | 1 | Is the margin adjustment of image correct? | Adjust the margin. |
| | 2 | Is the margin adjustment of image correct when the paper size is not selected in bypass feeding? | Adjust the margin. |
| | 3 | Is the margin adjustment of image at duplexing correct? | Adjust the margin. (05-434) |
| | 4 | Is the image location in primary/secondary scanning direction correct? | Adjust the location. |
| | 5 | Is the reproduction ratio of image in primary/secondary scanning direction correct? | Adjust the reproduction ratio. |
| | 6 | Is the tab setting correct? | Correct the setting. |
| Paper feeding / Transport area | 7 | Does the size of paper in the drawer or LCF correspond to the setting? | Use the appropriate paper size or correct the size setting. |
| | 8 | Is the width between the slides in the drawer correct (too wide)? | Correct the position of the slides. |
| | 9 | Is the width between the slides of the bypass tray correct (too wide)? | Correct the width. |
| | 10 | Is the sideways deviation adjustment for drawers or slides of the bypass tray correct? | Adjust the deviation. |
| | 11 | Is the paper aligning amount sufficient? | Adjust the aligning amount. |
| | 12 | Are the feed roller and transport roller dirty or worn out? | Clean or replace the rollers. |
| | 13 | Does the paper mode correspond to the paper type? | Use the appropriate paper type or paper mode. |
| | 14 | Using the recommended paper? | Use the recommended paper. |
| Transfer unit | 15 | Is there any stain caused by a poor cleaning, etc. on the transfer belt? | Clean the transfer belt. |
| | 16 | Is the transfer belt cleaning blade in proper contact with the transfer belt? | Check if the blade pressure spring is installed. |
| | 17 | Is the transfer belt cleaning blade contacted or released properly? | Check if the spring of the transfer belt cleaner clutch is removed or if any connector is disconnected. Otherwise replace the clutch. |
| | 18 | Is the 2nd transfer roller rotating properly? | Clean the area around the roller. Otherwise replace the roller. |
| | 19 | Is there any foreign matter or stain on the 2nd transfer roller? | Clean or replace the roller. |
| | 20 | Has the 2nd transfer roller reached to its PM life? | Replace the 2nd transfer roller. |
| Fuser unit | 21 | Are the fuser belt and pressure roller dirty? | Clean the fuser belt and pressure roller. |
| | 22 | Is the rib of transport guide dirty? | Clean the rib. |

5.3 Replacement of PC Boards and HDD

<CAUTION IN REPLACING PC BOARDS>

The ID for each equipment is registered on the LGC board, the DRV board, the SYS board and the SLG board. So, if their replacement is required, be sure to replace only one board at a time.

If more than one of the LGC board, the DRV board and the SYS board require replacement, replace them in the following procedure.

- 1) First, replace one of the board to be replaced.
- 2) Turn the power ON and confirm that "READY" is displayed.
- 3) Turn the power OFF.
- 4) Replace another board that requires replacement.
- 5) Repeat steps 2 to 4.

The LGC board and DRV board can be replaced without other settings.

When the HDD requires replacement, see "5.3.1 Replacing HDD".

When the SYS board requires replacement, see "5.3.2 Replacing SYS board".

When the SLG board requires replacement, see "5.3.3 Replacing SLG board".

When NVRAM requires replacement or clearing, see "5.3.4 NVRAM replacing and clearing".

5.3.1 Replacing HDD

<CAUTION IN REPLACING HDD>

When the HDD is replaced, it is necessary to back up the data in the HDD before replacing and to recover them after replacing.

Notes:

1. To maintain the security, ask users to perform the backup/restore for users' data/information in the HDD. The service technician can perform them only when users permit it.
2. Some data in the HDD cannot be backed up and can be kept only on the paper.

The procedure for replacing the HDD is as follows.

- (1) Ask users to back up the data in the HDD. See the following for the item of data, and the possibility and the measure of the backup.
 - Image data in the Electronic Filing
 - Archive them in the "e-Filing" of TopAccess.
 - F-code information, Template registration information, Address book
 - Back them up in the "Administrator" menu of TopAccess.
 - Department management data
 - Export them in "Administrator" menu of TopAccess.
 - Log data (Print, Scan, FAX (Transmission/Reception))
 - Export them in the "Administrator" menu of TopAccess. (Import cannot be performed.)
 - Data in the shared folder (Scanned data, Saved data of copy / FAX transmission)
 - Copy them to the client computer via the network. (The data which have been copied to the client computer cannot be copied to the shared folder.)
 - Print waiting data (Copying data and FAX reception data that are waiting to be printed due to the paper run-out and jam, etc.)
 - Finish printing them after the paper supply and the jam release, etc. (The data cannot be kept.)
 - Print job (Private print data, Schedule print data)
 - If any jobs are left, print them. (The data cannot be backed up.)
 - FAX saved data (Confidential / Bulletin board data)

- Print them. (The data cannot be backed up.)
 - Registration data for FAX transmission (Delayed transmission / Recovery transmission)
 - The data cannot be backed up.
- (2) Print out the “FUNCTION LIST FOR MAINTENANCE” (content of Function Mode (13) setting) list.
- Press the [USER FUNCTIONS] button and then the [USER] button.
 - Press the [LIST] button.
 - Key in [*] [#] [*] [*] [3] [3] and then press the [START] button. The list is outputted.
- (3) Print out the “FUNCTION” list.
- Press the [USER FUNCTIONS] button.
 - Press the [ADMIN] button, enter the password, and then press the [ENTER] button.
 - Press the [LIST/REPORT] button and then the [LIST] button.
 - Press the [FUNCTION] button. The list is outputted.
- (4) Replace the HDD.
- (5) Update of HDD program data and UI data.
- Create partitions. (In case of using the download jig, this is not necessary.)
While pressing [3] and [CLEAR] button, turn the power ON. When “Firmware Version Up Mode” appears on the LCD, key in [3] and press the [START] button.
 - Update with the USB storage. See “6. FIRMWARE UPDATING” for details.
 - Format the HDD. (Setting Mode (08-690: 2))
 - * When the FAX unit (GD-1150) is installed. Start up with the FAX Clearing Mode (1*). Perform the 1*-100 (FAX Set Up), 1*-102 (Clearing the image data) of the FAX Clearing Mode.
 - Perform the gamma automatic adjustment of the printer. See “3.6.1 Automatic gamma adjustment” for details.
- (6) Ask users to reset the user’s setting items and to restore the data/information. See the following for the reset and the restore.
- Printer driver
 - Upload them in the “Administrator” menu of TopAccess.
 - F-code information, Template registering information, Address book
 - Restore them in the “Administrator” menu of TopAccess
 - Department management data
 - Import them in the “Administrator” menu of TopAccess.
 - Image data in the Electronic Filing
 - Upload them in the “e-Filing” of TopAccess.
- (7) Referring to the “FUNCTION LIST FOR MAINTENANCE” list which was printed beforehand, perform the re-setting.
- Print out the “FUNCTION LIST FOR MAINTENANCE” list after the formatting. (Refer to the procedure of (2).)
 - While pressing [1] and [3] simultaneously, turn the power ON. (Function Mode)
 - Compare the lists which were printed before and after the formatting to check the setting items having the different setting values. Set the value which was set before the formatting.
 - Turn the power OFF.
- (8) Referring to the “FUNCTION” list which was printed beforehand, perform the re-setting of the default setting of the FAX function.
- Press the [USER FUNCTIONS] button.
 - Press the [ADMIN] button, enter the password, and then press the [ENTER] button.
 - Press the [FAX] button and then the [TERMINAL ID] button to set each item.
 - Press the [INITIAL SETUP] button to set each item.

5.3.2 Replacing SYS board

<<CAUTION IN REPLACING the SYS board>>

Perform the following procedures and settings when the SYS board is replaced.

<After replacing the SYS board>

- (1) Install DIMM (main memory) to the new SYS board (from the old SYS board).
- (2) Install NVRAM to the new SYS board (from the old SYS board).
- (3) Update the version of system ROMs (System Firmware, OS data, UI data) (The ROMs had been used for the old SYS board).
 - * See "6. FIRMWARE UPDATING" for the details of System ROM update.
- (4) Turn the power OFF and start up with the Setting Mode (08).
- (5) When the message "SRAM ERROR DOES IT INITIALIZE?" is displayed on the LCD, press the [INITIALIZE] button.
 - * SRAM is cleared
 - * If SRAM is not performed, F090 error occurs when starting up.

Notes:

- When SRAM is cleared, following items need to be re-set, so make sure the contents of settings are kept as a record.
 - <FAX settings>
 - Terminal ID
 - Default setting of fax
 - <E-mail settings>
 - Setting of properties for E-mail message
 - <Internet Fax>
 - Setting of properties for Internet Fax
 - When SRAM is cleared, the toner cartridge consumed count of Automatic ordering function of supplies becomes 0, however, it cannot be re-set.
- (6) [If a scrambler board has already been installed]
Perform 08-698 (Entering the key code for scrambler board). Have the user enter the key code.
 - (7) Perform 08-200 (date and time setting) to set Date/Time.
 - (8) Check the serial number after performing 08 Code 995. If the number is different from the number on the label attached on the rear cover of the machine, re-input the correct number with 08 Code 995.
 - (9) Perform 08-693 (initialization of the NIC information).
 - (10) Turn the power OFF.
 - * If the FAX board has not been installed, skip to step (14).
 - (11) Start up with the FAX Clearing Mode (1*)

(12) Perform 1*-102 (Clearing the image data).

Notes:

Following image data are deleted when 1*-102 is performed.

- Images of fax polling transmission
- Images of fax Mailbox and box information
- Images of fax transmission
- Images of fax reception

(13) Turn the power OFF.

(14) Turn the power ON.

(15) Set the dial type. [USER FUNCTIONS] → [ADMIN] → [FAX] → [INITIAL SETUP]

5.3.3 Replacing SLG board

<CAUTION IN REPLACING SLG BOARD>

When the SLG board has been replaced, "Data transfer of characteristic value of scanner / SYS board → SLG board (05-363)" must be performed.

5.3.4 Replacing or clearing NVRAM

<<Caution in replacing or clearing NVRAM>>

When NVRAM has been replaced or cleared ("System all clearing (08-669)"), the setting must be performed according to the following procedure.

<After replacing or clearing NVRAM>

- (1) Take off the FAX board if installed.
- (2) Start up with the Setting Mode (08).
- (3) Check the serial number after performing 08-995 (Equipment number display). If the number is different from the one on the label attached to the rear cover of the equipment, enter the correct serial number again with 08-995.

Note:

The MAC address of the equipment is generated based on this serial number. Entering the incorrect serial number may result in an inability to access the network due to an invalid MAC address.

- (4) Perform 08-693 (initialization of the NIC information).
- (5) Perform "Data transfer of characteristic value of scanner / SLG board → SYS board (05-364)".
- (6) Perform "Image quality control initialization (05-396)" (Chapter 3.3), and then perform "Automatic gamma adjustment (05-1642, 1000 and 1002)" consecutively (Chapters 3.5.1 and 3.6.1).
- (7) Perform "1: Electrical counter -> Backup counter" of 08-257 (Counter copy) to recover the total counter.
- (8) Shut down the equipment.

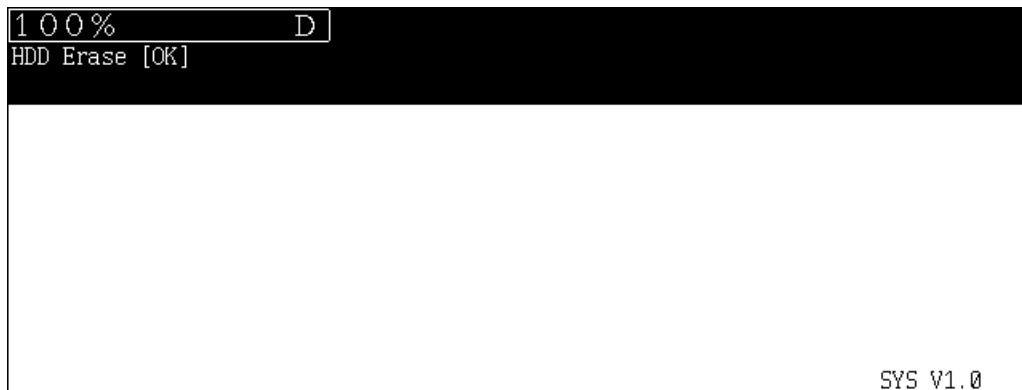
- (9) Install the FAX board taken off in step (1).
 - * If the FAX board has not been installed, the following steps are not necessary.
- (10) Start up with the Setting Mode (08).
- (11) Set the destination with 08-701 (Destination setting of FAX machine).
- (12) Start up with the FAX Clearing Mode (1*).
- (13) Perform 1*-100 (FAX Set Up).
- (14) Turn the power OFF.
- (15) Turn the power ON.
- (16) Set the dial type. [USER FUNCTIONS] → [ADMIN] → [FAX] → [INITIAL SETUP]

5.3.5 Cautions when Data overwrite kit (GP-1060) is installed

When the Data overwrite kit (GP-1060) is installed, follow the cautions below.

<<Cautions when disposing of the HDD>>

Before disposing of the HDD of the equipment, be sure to perform 08-1426 (forcible HDD data clearing) and confirm that deleting of the HDD data is completed.



- Check that the percentage is 100% and “HDD Erase [OK]” appears on the upper left of the screen.
- Check that the version (SYS V1.0) is displayed on the lower right of the screen.

* When the scrambler board is installed, data in the HDD are overwritten with encrypted data and erased.

<<Caution when disposing of the SYS board>>

Before the SYS board is disposed, the following codes can be performed.

- 08-1427 (Forcible NVRAM data all clearing)
- 08-1428 (Forcible SRAM backup data all clearing)

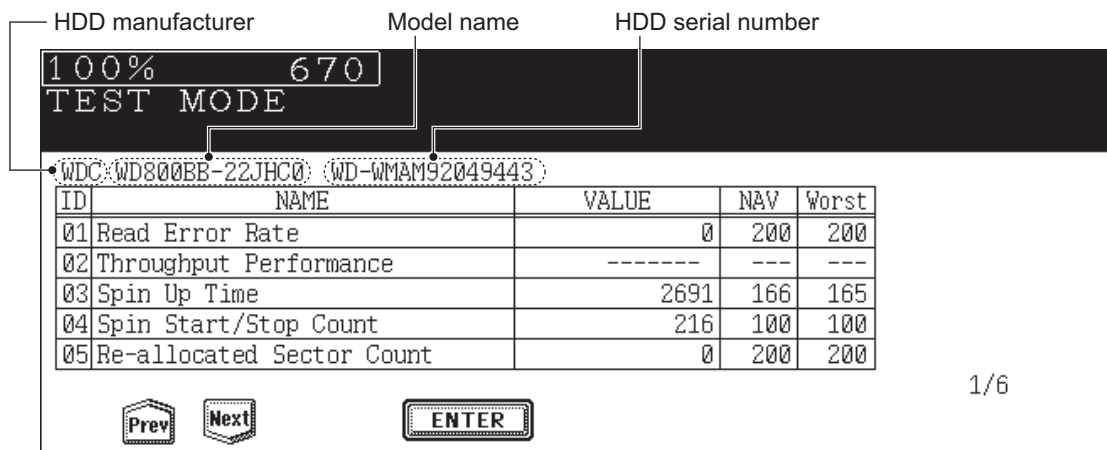
If these codes are performed, the equipment cannot be started up.

5.3.6 HDD information display

This code displays the HDD operation history, which is recorded in the HDD, on the control panel. HDD failure can be diagnosed or predicted with the information displayed.

1) Display

The following screen is displayed with setting code 08-670.



- Items supported differ depending on the HDD manufacturer.
- "---" is displayed on the VALUE, NAV and Worst columns if items are not supported.

2) Usage

The combination of the values of ID=05 and c5 is used to diagnose whether or not the HDD has a physical failure when HDD failure is suspected (service call F100-180 or 120 occurred).

| Result | | Description | Diagnosis |
|--------|--------------------------------------|--|----------------------------------|
| ID | VALUE | | |
| 05 | 0 | Low possibility of physical failure | HDD replacement is not required. |
| c5 | 0 | | |
| 05 | From 1 to 999 | Defective sector has been reassigned and HDD is recovered. | HDD replacement is not required. |
| c5 | 0 | | |
| 05 | Any value | High possibility of defective sector existence. (There will be a possibility of physical failure depending on the use of HDD.) | HDD replacement is recommended. |
| c5 | 1 or more | | |
| 05 | Either one is at least 1000. | High possibility of physical failure | HDD replacement is recommended. |
| c5 | | | |
| 05 | All values are displayed as "-----". | High possibility of physical failure (A HDD connector, harness or SYS board may be one of the causes.) | HDD replacement is recommended. |
| c5 | | | |

3) ID=05 and c5

| ID | Name | Description | Remarks |
|----|------------------------------|--|--|
| 05 | Re-allocated Sector Count | The number of sectors reassigned | This value tends to increase at HDD failure. |
| c5 | Current Pending Sector Count | The number of candidate sectors to be reassigned | This value tends to increase at HDD failure. |

4) Description of each ID

| ID | Name | Meaning |
|----|--|--|
| 01 | Read Error Rate | This attribute is a measure of the read error rate. |
| 02 | Throughput Performance | This attribute is a measure of the throughput performance. |
| 03 | Spin Up Time | This attribute is a measure of how quickly the drive is able to spin up from a spun down condition. |
| 04 | Spin Start/Stop Count | This attribute is a measure of the total number of spin ups from a spun down condition. |
| 05 | Re-allocated Sector Count | This attribute is a measure of the total number of reallocated sectors. |
| 07 | Seek Error Rate | This is a measure of the seek error rate. |
| 08 | Seek Time Performance | This attribute is a measure of a drive's seek performance during normal online operations. |
| 09 | Power-On Hours | This attribute is a measure of the total time (hours or minutes depending on disk manufacturer) the drive has been on. |
| 0a | Spin Retry Count | This attribute is a measure of the total number of spin retries. |
| 0c | Power Cycle Count | This attribute is a measure of the number of times the drive has been turned on. |
| c0 | Power off Retract Count | This attribute is a measure of the total number of emergency unloads. |
| c1 | Load Cycle Count | This attribute is a measure of the total number of load/unloads. |
| c2 | Temperature | This attribute is a measure of the temperature in the HDD. |
| c3 | ECC On the Fly Count | This attribute is a measure of the total number of the ECC On the Fly. |
| c4 | Reallocation Event Count | This attribute is a measure of the total number of the reallocation events. |
| c5 | Current Pending Sector Count | This attribute is a measure of the total number of candidate sectors to be reallocated. |
| c6 | Off-Line Scan Uncorrectable Sector Count | This attribute is a measure of the total number of uncorrectable sectors found during the off-line scan. |
| c7 | Ultra DMA CRC Error Count (Rate) | This attribute is a measure of the total number of errors found in data transfer in the Ultra-DMA mode. |
| c8 | Write Error Rate | This attribute is a measure of the write error rate. |

5.4 Other errors

- 1) Operation cannot be performed (operation from the control panel is not successful) after installing the option(s) such as Wireless LAN module, Scrambler board and/or Parallel board.
 - Check if the optional board is installed properly.

- 2) The connection to the Wireless LAN cannot be made even though it is set to "Enabled".
 - The connection state and settings of the Wireless LAN can be checked with [USER FUNCTIONS] → [ADMIN] → [WIRELESS LAN] → [SETTING CHECK].
Confirm the settings with the administrator.
 - * "NIC INITIALIZING" does not disappear at the time of the power being turned ON and it disappears after 6 minutes with the NIC initializing time-out. In this case, the connection to the Wireless LAN did not succeed even though "NIC INITIALIZING" disappears.
 - * The connection to the Wireless LAN cannot be made if the Access Point to be connected is not found or security settings are not correct.

6. FIRMWARE UPDATING

In this equipment, following firmware is written on the ROM on each board.

| Firmware | Stored | Update method |
|---|--|---|
| Master data (HDD program data, UI data) | Hard disk | USB Storage Device |
| System ROM (System firmware, OS data, UI data) | System control PC board (SYS board) | USB Storage Device * Update with Download jig also possible. |
| Engine ROM (Machine firmware) | Logic PC board (LGC board) | USB Storage Device * Update with Download jig also possible. |
| Scanner ROM (Scanner firmware) | Scanning section control PC board (SLG board) | USB Storage Device * Update with Download jig also possible. |
| RADF ROM (RADF firmware) | RADF control PC board (MR-3018) | Download jig |
| Finisher ROM (Finisher firmware) | Finisher control PC board (MJ-1023/ MJ-1024) | Download jig |
| Finisher ROM (Saddle stitcher firmware) | Finisher control PC board (MJ-1024) | Download jig |
| FAX ROM (FAX firmware) | FAX board (GD-1200) | Download jig |

When you want to update the firmware above or the equipment becomes inoperative status due to some defectives of the firmware, updating the firmware is available by the following actions.

- Updating with the download jig
 P.6-2 "6.1 Firmware Updating with Download Jig"
- Updating with the USB Storage Device
 P.6-26 "6.2 Firmware Updating with USB Storage Device"

Notes:

- Written firmware varies depending on the kinds of the boards provided as service parts. For updating, only the minimum firmware is installed on the system control PC board, logic PC board, and scanning section control PC board. No firmware is installed on the FAX board. The latest version of the firmware at the delivery is written on the RADF control PC board and finisher control PC board.
 When any of above boards is replaced with a new one in the field, confirm the other firmware version used with and then write the suitable version of the firmware.
- The firmware (master data) is not installed on the hard disk provided as a service part. When the hard disk is replaced with a new one, confirm the other firmware version used with and then write the suitable version of the firmware.

6.1 Firmware Updating with Download Jig

In this equipment, it is feasible to update the firmware automatically by connecting the download jig using the dedicated connector and turning ON the equipment.

The download jig consists of the ROM, in which the program is written, and the jig board.


And two types of the download jigs are available for each type of the firmware.

For updating the firmware, in addition to the current ways such as updating each firmware individually, the batch update of the firmware of the equipment is available (except the hard disk and the option).

| Firmware | Stored | Download jig | |
|---|---|---|-------------------|
| | | Batch update | Individual update |
| System ROM | System control PC board (SYS board) | PWA-DWNLD-350-JIG2 (48 MB) <Two download jigs are needed.> | - |
| Engine ROM | Logic PC board (LGC board) | | K-PWA-DLM-320 |
| Scanner ROM | Scanning section control PC board (SLG board) | | K-PWA-DLM-320 |
| RADF ROM | RADF control PC board (MR-3018) | - | K-PWA-DLM-320 |
| Finisher ROM (Finisher firmware) | Finisher control PC board (MJ-1023/MJ-1024) | - | K-PWA-DLM-320 |
| Finisher ROM (Saddle stitcher firmware) | Finisher control PC board (MJ-1024) | - | K-PWA-DLM-320 |
| FAX ROM | FAX board (GD-1200) | - | K-PWA-DLM-320 |

Refer to the following for the details to update with each download jig.

 P.6-4 "6.1.1 PWA-DWNLD-350-JIG2 (48 MB)"

 P.6-15 "6.1.3 K-PWA-DLM-320"

PWA-DWNLD-350-JIG2 (48MB)

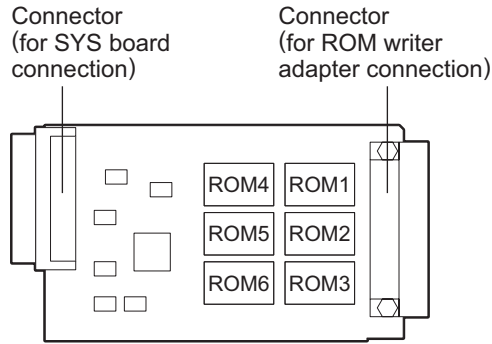


Fig.6-1 Jig board: PWA-DWNLD-350-JIG2 (48 MB)

Important:

- To perform update, two download jigs (PWA-DWNLD-350-JIG2) are needed.
- The download jig (PWA-DWNLD-350-JIG) is the jig in which the Flash ROM is mounted on the board directly. Therefore, ROM writer adapter (PWA-DL-ADP-350) is required to write the data to these Flash ROMs. Refer to the following to write the data.
📖 P.6-13 "6.1.2 Writing the data to the download jig (PWA-DWNLD-350-JIG)"

K-PWA-DLM-320

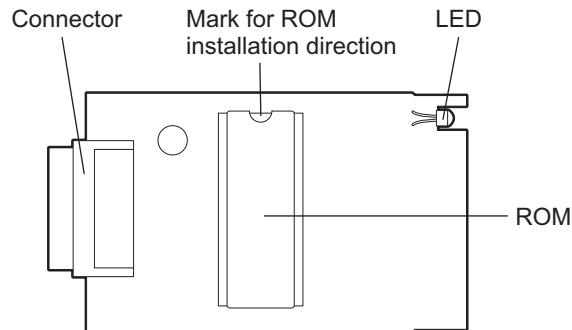


Fig.6-2 Jig board: K-PWA-DLM-320

Important:

Pay attention to the direction of the ROM.

6.1.1 PWA-DWNLD-350-JIG2 (48 MB)

The firmware of the equipment except for the hard disk and the option can be updated individually or in a batch by using PWA-DWNLD-350-JIG2 (48 MB). Update the ROM data written on each board according to the need such as the case of replacing the system control PC board, logic PC board or scanning section control PC board.

The data to be overwritten by this update are as follows.

<Updating System ROM>

- System firmware (System firmware data, FROM internal program data)
- OS data (FROM basic section software)
- UI data (fixed section data, common section data, UI data in FROM displayed at power ON)

<Updating Engine ROM>

Engine ROM data

<Updating Scanner ROM>

Scanner ROM data

[A] Update procedure

Important:

- Use two "PWA-DWNLD-350-JIG2" for the download jigs.
- Turn OFF the power before installing and removing the download jig.
- Do not turn OFF the power during the update. The data could be damaged and not be operated properly.

(1) Write the ROM data to be updated to the download jig.

📖 P.6-13 "6.1.2 Writing the data to the download jig (PWA-DWNLD-350-JIG)"

(2) Shut down the equipment.

(3) Take off the connector cover.

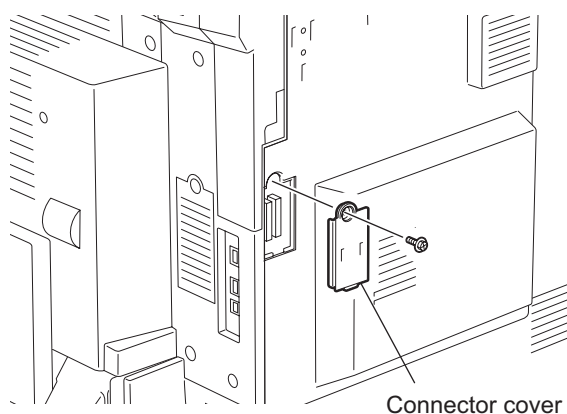


Fig.6-3

- (4) Connect the download jig with the jig connector (CN105, CN106) on the SYS board.

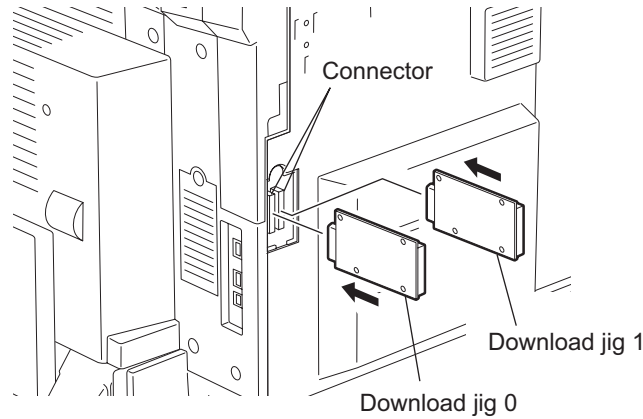


Fig.6-4

| Download jig number | Connector name |
|---------------------|----------------|
| Download jig 0 | CN105 |
| Download jig 1 | CN106 |

- (5) Turn ON the power while [8] button and [9] button are pressed simultaneously. The screen for selecting the items to be updated is displayed. "*" is displayed next to the items to be updated. (All items are selected in the default settings.)

| | |
|-------------------------------------|----------------------------|
| Download Board Firmware Update Mode | Version in update media |
| Select Update Item | OS Version... Vx.xx/x.xx x |
| *0. OS Update | UIF Version... Vxxx.xxx x |
| *1. UI Data Update | UI0 Version... Vxxx.xxx x |
| *2. System Firmware Update | UI1 Version... Vxxx.xxx x |
| *3. Engine Firmware Update | SYS Version... Vxxx.xxx x |
| *4. Scanner Firmware Update | ENG Version... xxxxx-xx |
| | SCN Version... xxxxx-xx |

- (6) Select the item with the digital keys.
 “*” is displayed next to the selected item. Display or delete the “*” by pressing the number of the item. All items are selected in the default settings.
- Select all items to update the firmware of the equipment in a batch.
 - Select items as follows to update it individually.

<Updating System ROM>

Select “0. OS Update”, “1. UI Update”, and “2. System Firmware”.

<Updating Engine ROM>

Select “3. Engine Firmware Update” only.

<Updating Scanner ROM>

Select “4. Scanner Firmware Update” only.

Example: Updating the system ROM

| Download Board Firmware Update Mode Select Update Item | Version in update media |
|---|----------------------------|
| *0. OS Update | OS Version... Vx.xx/x.xx x |
| *1. UI Data Update | UIF Version... Vxxx.xxx x |
| *2. System Firmware Update | UI0 Version... Vxxx.xxx x |
| 3. Engine Firmware Update | UI1 Version... Vxxx.xxx x |
| 4. Scanner Firmware Update | SYS Version... Vxxx.xxx x |
| | ENG Version... xxxxx-xx |
| | SCN Version... xxxxx-xx |

(Updating all the items is taken as an example and explained in the following procedures.)

- (7) Press the [START] button.
Updating starts and the processing status is displayed on the LCD screen.

```

Download Board Firmware Update Mode

Download Board  -> FROM Update Start.  OS Update      .....
Check Devices   -  Completed
Update Status   -  Installing
Data Check      -

Engine MAIN Update .. Flash Update
Scanner Firm Update .. Flash Update
  
```

| Status display during update | Status display when update is completed |
|------------------------------------|---|
| OS Update | OS Update Completed |
| UI Data Update | UI Data Update Completed |
| SysFirm Update | SysFirm Update Completed |
| Engine MAIN Update .. Flash Update | Engine MAIN Update .. Completed |
| Scanner Firm Update..Flash Update | Scanner Firm Update.. Completed |

- (8) "Update Completed." is displayed at the bottom of the LCD screen after the updating is completed properly.

```

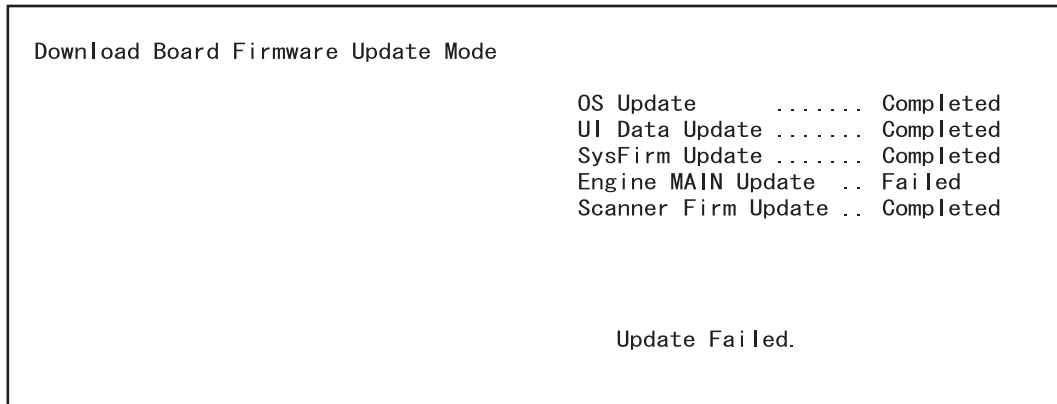
Download Board Firmware Update Mode

OS Update      ..... Completed
UI Data Update  ..... Completed
SysFirm Update  ..... Completed
Engine MAIN Update .. Completed
Scanner Firm Update .. Completed

Update Completed.
  
```

“Update Failed.” is displayed at the bottom of the LCD screen when the updating is not completed properly. “Failed” appears next to the failed item on the status display. Turn OFF the power, and then check the following items. After confirming and cleaning the problems, restart updating from the beginning.

- Is the download jig connected properly?
- Is the updating data written to the download jig properly?
- Do the download jig and the equipment operate properly?



- (9) Turn OFF the power, remove the download jig and install the cover plate and the connector cover.
- (10) Perform the initialization of the updating data.
 - Turn ON the power while [0] button and [8] button are pressed simultaneously.
 - Key in “947”, and then press the [START] button.
 - Press the [INITIALIZE] button.

[B] Confirmation of the updated data

After the updating is completed, check each data version in the Setting Mode (08) to confirm that the data was overwritten properly.

<Updating System ROM>

- 08-900: System ROM version
- 08-920: FROM basic section software version
- 08-921: FROM internal program version
- 08-922: UI data fixed section version
- 08-923: UI data common section version
- 08-930: Version of UI data in FROM displayed at power ON

<Updating Engine ROM>

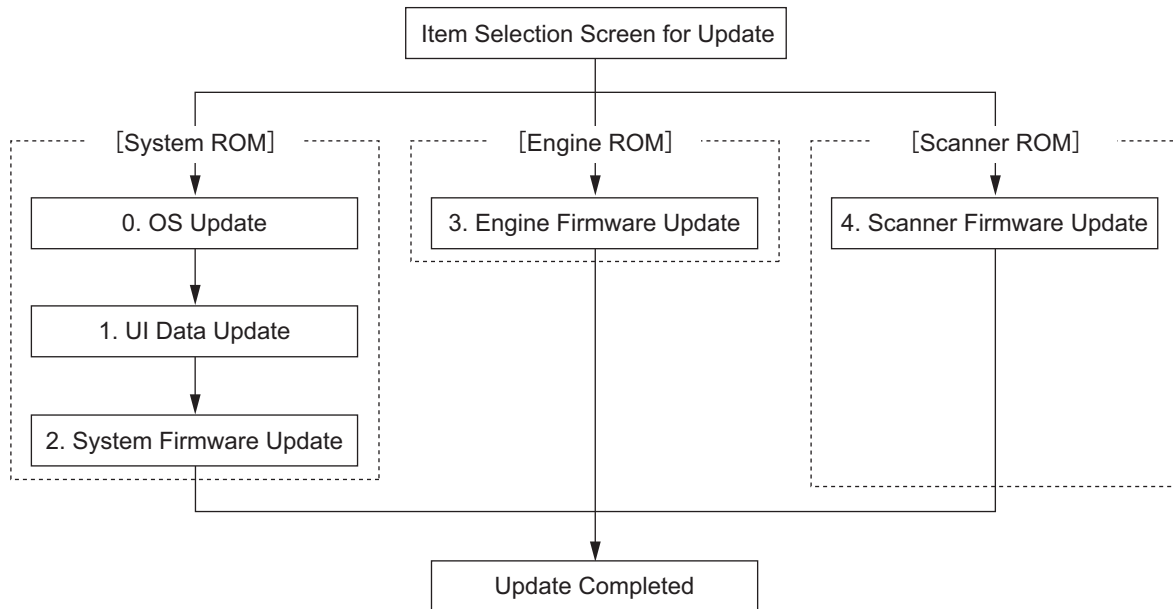
- 08-903: Engine ROM version

<Updating Scanner ROM>

- 08-905: Scanner ROM version

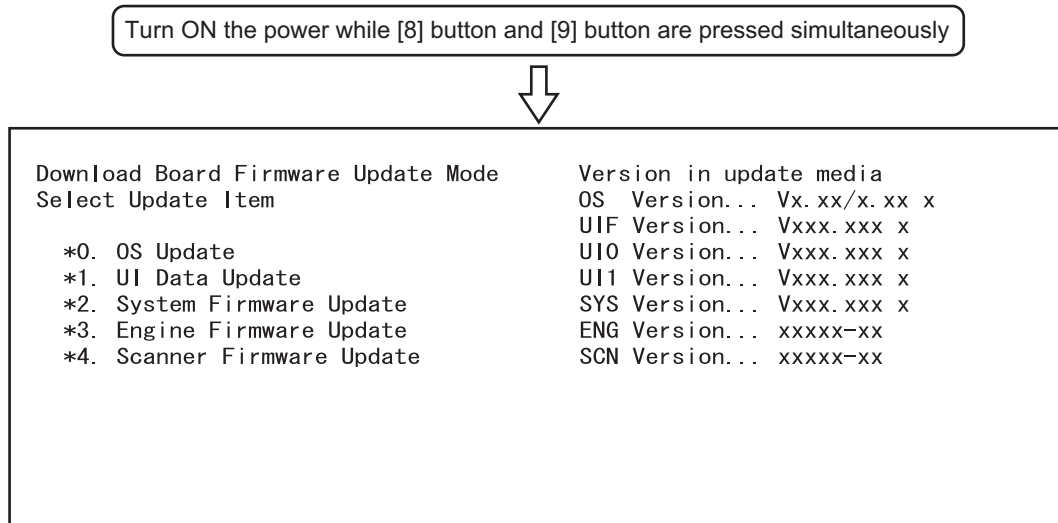
[C] Display during the update

Update is performed in parallel as shown in the transition diagram below.



Below is an example of the changes of the LCD screen during update.

Note that the screen order may be different from the actual one, because a parallel update is performed in the process.



↓

Select items to be updated and press the [START] button to start updating the [System ROM], [Engine ROM] and [Scanner ROM] in parallel.

```

Download Board Firmware Update Mode

Download Board    -> FROM Update Start.  OS Update      .....
Check Devices    -   Completed
Update Status    -   Installing
Data Check       -

Engine MAIN Update .. Flash Update
Scanner Firm Update .. Flash Update

Engine Update Status
xxxx/nnnnn
Scanner Update Status
xxxx/nnnnn

```

↓ When the [System ROM]-[OS Update] has been updated, "OS Update...Completed" is displayed and the [UI Update] update will start.

```

Download Board Firmware Update Mode

Download Board    -> FROM Update Start.  OS Update      ..... Completed
Check Devices    -   Completed
Update Status    -   Installing
Data Check       -

Engine MAIN Update .. Flash Update
Scanner Firm Update .. Flash Update

Engine Update Status
xxxx/nnnnn
Scanner Update Status
xxxx/nnnnn

```

↓ When the [System ROM]-[UI Update] has been updated, "UI Data Update...Completed" is displayed and the [System Firmware Update] update will start.

```

Download Board Firmware Update Mode

Download Board    -> FROM Update Start.  OS Update      ..... Completed
Check Devices    -   Completed
Update Status    -   Installing
Data Check       -

Engine MAIN Update .. Flash Update
Scanner Firm Update .. Flash Update

Engine Update Status
xxxx/nnnnn
Scanner Update Status
xxxx/nnnnn

```



When the [Engine ROM] has been updated, "Engine MAIN Update..Flash Update" is changed to "Engine MAIN Update..Completed".

```

Download Board Firmware Update Mode

Download Board    -> FROM Update Start.  OS Update      ..... Completed
Check Devices    -   Completed          UI Data Update ..... Completed
Update Status    -   Installing         SysFirm Update .....
Data Check       -                               Engine MAIN Update .. Completed
                                           Scanner Firm Update .. Flash Update

Scanner Update Status
xxxx/nnnnn
  
```



When the [System ROM]-[System Firmware Update] has been updated, "SysFirm Update...Completed" is displayed.

```

Download Board Firmware Update Mode

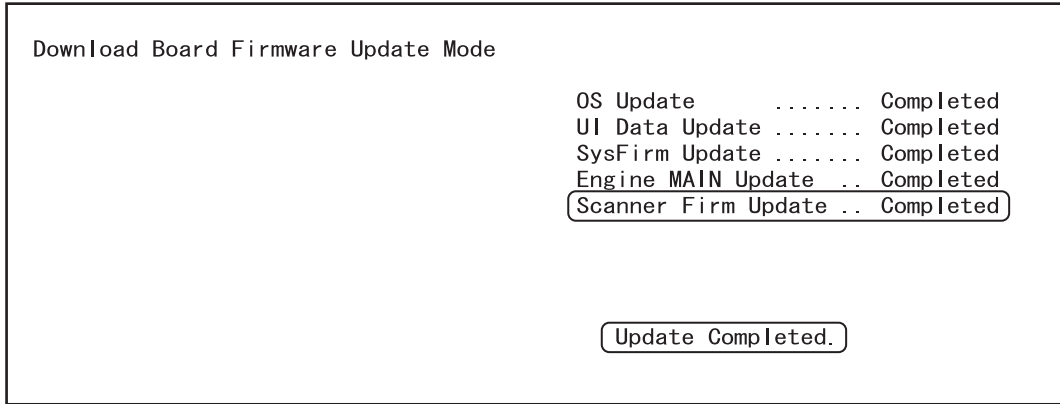
OS Update      ..... Completed
UI Data Update ..... Completed
SysFirm Update ..... Completed
Engine MAIN Update .. Completed
Scanner Firm Update .. Flash Update

Scanner Update Status
xxxx/nnnnn
  
```

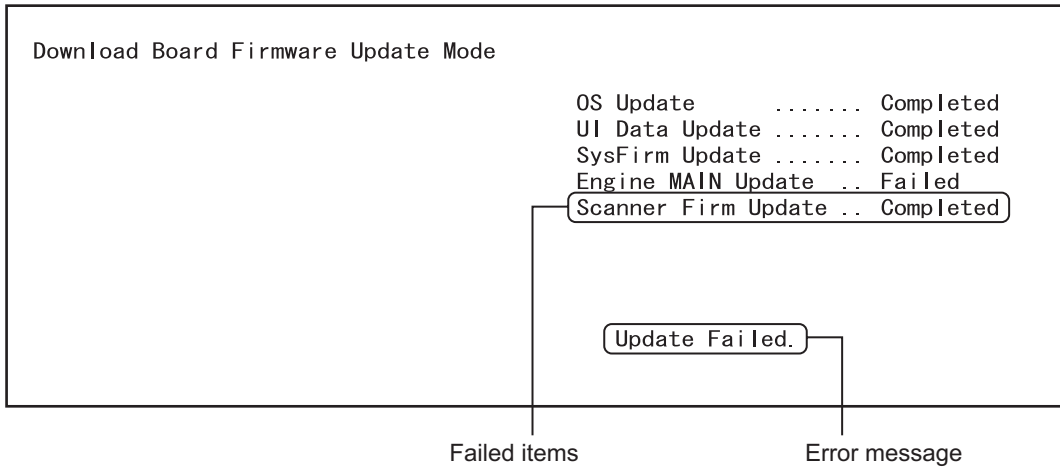


When the [Scanner ROM] has been updated, "Scanner Firm Update..Flash Update" is changed to "Scanner Firm Update..Completed".

When all data has been updated, "Update Completed" is displayed.



- * "Update Failed." is displayed at the bottom of the LCD screen when the updating is not completed properly. "Failed" appears next to the failed item on the status display.



6.1.2 Writing the data to the download jig (PWA-DWNLD-350-JIG)

The download jig (PWA-DWNLD-350-JIG) is the jig in which the Flash ROM is mounted on the board directly. The ROM writer adapter (PWA-DL-ADP-350) is required to write data to these Flash ROMs. Connect the download jig with the ROM writer via ROM writer adapter to write data. For the procedure to write data, refer to the download procedure, instruction manual of each ROM writer, or others.

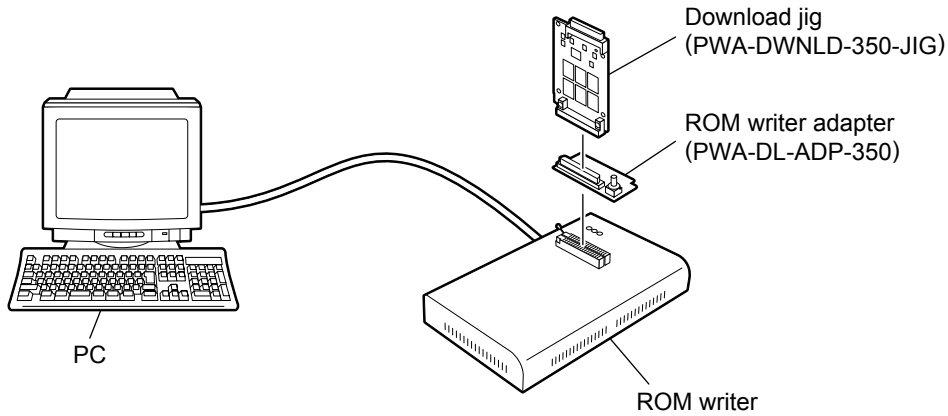


Fig.6-5

Note:

There are two types of the ROM writer adapter. Use the proper one according to the ROM writer to be used. Applicable type of the adapter for the ROM writer can be confirmed by the model name indicated on the board. Confirm that the adapter is available for the ROM writer to be used before connecting them. If an unapplied adapter is connected, the application of the ROM writer judges it as an error and writing the data cannot be implemented. Applicable combinations of the ROM writer and adapter are as follows.

| ROM writer | ROM writer adapter |
|---|----------------------------------|
| Minato Electronics MODEL 1881XP (or equivalent) | PWA-DL-ADP-350-1881 (model 1881) |
| Minato Electronics MODEL 1893/1895/1931/1940 (or equivalent) | PWA-DL-ADP-350-1931 (model 1931) |

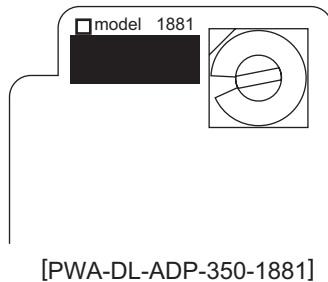


Fig.6-6 PWA-DL-ADP-350-1881

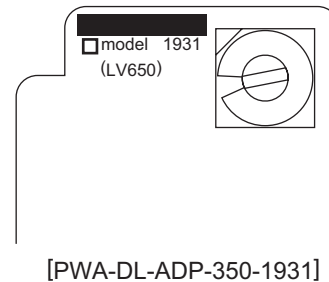


Fig.6-7 PWA-DL-ADP-350-1931

- Precaution when writing the data
 - Consider two download jigs (PWA-DWNLD-350-JIG2) as “Download jig 0” and “Down load jig 2” and do not mix them up when writing.
 - Set the writing voltage (VID) to 3.3 V.
 - When writing the data, set the address from 0 to 3FFFFFF. The data may not be written correctly if it is not set.
 - The Flash ROM in which the data will be written, on the download jig is selected by switching the rotary switch on the adapter. Be sure to switch the rotary switch on the adapter depending on the data (file) to be written.

| RotarySwitch | File Name | | Flash ROM |
|--------------|----------------|----------------|-----------|
| | Download jig 0 | Download jig 1 | |
| 1 | jigu0-1.bin | jigu0-0.bin | ROM1 |
| 2 | jigu1-1.bin | jigu1-0.bin | ROM2 |
| 3 | jigu2-1.bin | jigu2-0.bin | ROM3 |
| 4 | N/A | N/A | ROM4 |
| 5 | N/A | N/A | ROM5 |
| 6 | N/A | N/A | ROM6 |

Note:

Be sure not to confuse different ROM Versions since the file name is identical although the ROM version is different.

6.1.3 K-PWA-DLM-320

The firmware of the equipment (engine ROM, scanner ROM) and the option (RADF ROM, Finisher ROM, FAX ROM) can be updated individually by using K-PWA-DLM-320. Update the ROM data written on each board according to the need such as the case of replacing the board.

The data to be overwritten by this update are as follows.

<Updating Engine ROM>

Engine ROM data

<Updating Scanner ROM>

Scanner ROM data

<Updating RADF ROM>

RADF ROM data

<Updating Finisher ROM>

- Finisher firmware
- Saddle stitcher firmware

<Updating FAX ROM>

FAX ROM data

[A] Update Procedure

Since the procedure differs depending on the data, see the each procedure below.

Important:

- Turn OFF the power before installing or removing the download jig.
- Do not turn OFF the power during the update. The data could be damaged and not be operated properly.

<Updating Engine ROM>

- (1) Install the ROM to the download jig.
Make sure the direction is correct (☞ P.6-3 "K-PWA-DLM-320").
- (2) Shut down the equipment.
- (3) Take off the connector cover.

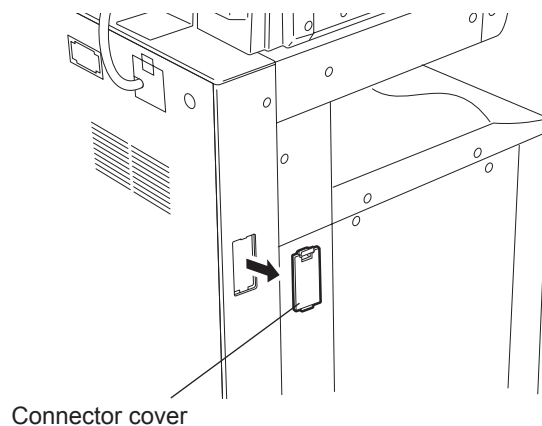


Fig.6-8

- (4) Remove the cover plate.

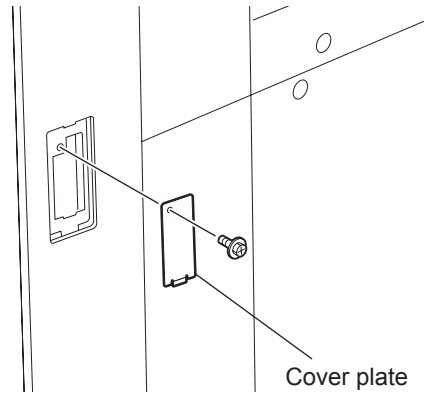


Fig.6-9

- (5) Connect the download jig with the jig connector (CN344) on the logic PC board (LGC board).

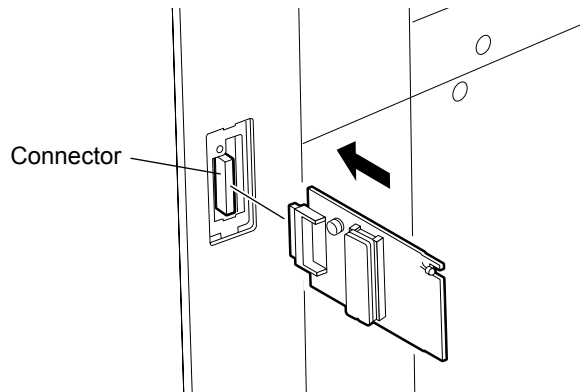


Fig.6-10

- (6) Turn ON the power while [0] button and [8] button are pressed simultaneously. Updating starts automatically and the LED on the download jig lights.
- (7) When the update is completed properly, the LED on the download jig blinks. The LED starts blinking in approx. 20 sec. since the update starts. It is assumed that the update is failed if it does not start blinking even though 1 min. has passed. In this case, turn OFF the power and check the following items. Then, clear the problem and restart updating from the beginning.
- Is the download jig connected properly?
 - Is the ROM installed to the download jig properly?
 - Is the updating data written on the ROM of the download jig properly?
 - Do the download jig and the equipment operate properly?
- (8) Turn OFF the power, remove the download jig and install the cover plate and the connector cover.

<Updating Scanner ROM>

- (1) Install the ROM to the download jig.
Make sure the direction is correct (P.6-3 " K-PWA-DLM-320").
- (2) Shut down the equipment.
- (3) Take off the right upper cover.

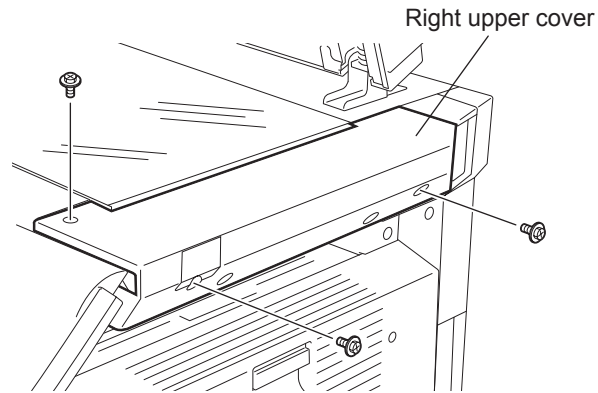


Fig.6-11

- (4) Remove the cover plate.

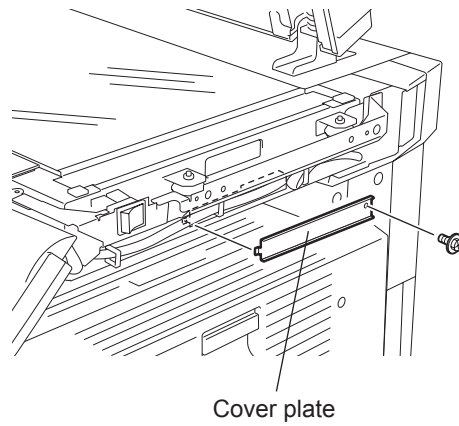


Fig.6-12

- (5) Connect the download jig with the jig connector (CN16) on the scanning section control PC board (SLG board).

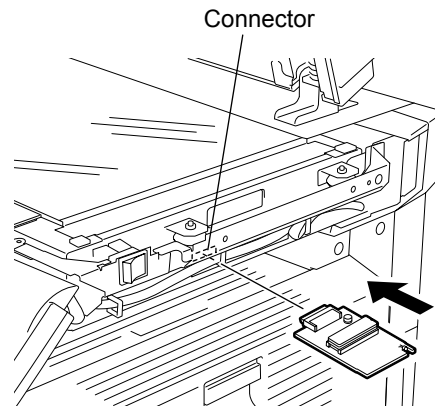


Fig.6-13

- (6) Turn ON the power while [0] button and [8] button are pressed simultaneously. Updating starts automatically and the LED on the download jig lights.
- (7) After the update is completed properly, the LED on the download jig blinks. The LED starts blinking in approx. 20 sec. since the update starts. It is assumed that the update is failed if it does not start blinking even though 1 min. has passed. In this case, turn OFF the power and check the following items. Then, clear the problem and restart updating from the beginning.
- Is the download jig connected properly?
 - Is the ROM installed to the download jig properly?
 - Is the updating data written on the ROM of the download jig properly?
 - Do the download jig and the equipment operate properly?
- (8) Turn OFF the power, remove the download jig and install the cover plate and the right upper cover.

<Updating RADF ROM>

- (1) Install the ROM to the download jig.
Make sure the direction is correct (P.6-3 " K-PWA-DLM-320").
- (2) Shut down the equipment.
- (3) Take off the RADF rear cover.

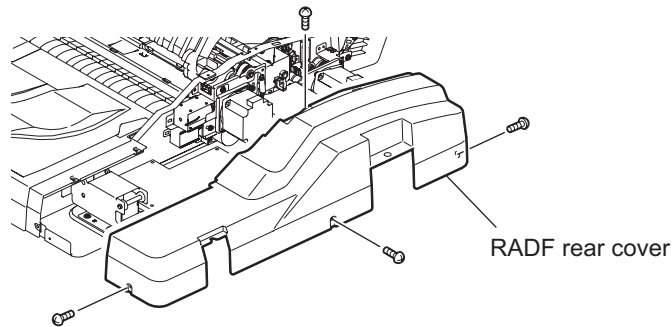


Fig.6-14

- (4) Connect the download jig with the jig connector (CN81) on the RADF control PC board.

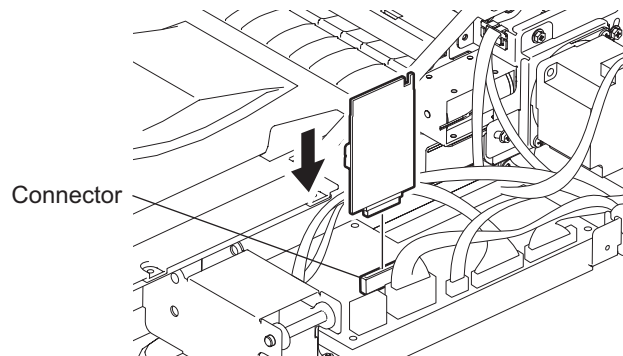


Fig.6-15

- (5) Turn ON the power while [0] button and [8] button are pressed simultaneously.
Updating starts automatically and the LED on the download jig lights.
- (6) After the update is completed properly, the LED on the download jig blinks slowly (at an interval of approx. 0.8 sec.). The LED starts blinking in approx. 15 sec. since the update starts. It is assumed that the update is failed if it does not start blinking even though 1 min. has passed or the LED blinks fast (at an interval of approx. 0.1 sec.). In this case, turn OFF the power and check the following items. Then, clear the problem and restart updating from the beginning.
 - Is the download jig connected properly?
 - Is the ROM installed to the download jig properly?
 - Is the updating data written on the ROM of the download jig properly?
 - Do the download jig and the equipment operate properly?
- (7) Turn OFF the power, remove the download jig and install the RADF rear cover.

<Updating Finisher ROM>

Finisher firmware (MJ-1023/1024) and saddle stitcher firmware (MJ-1024 only) are written on the finisher ROM. These two kinds of firmware can be updated individually by installing the download jig to the finisher control PC board.

Remark:

The following updates are needed according to the finisher model.

- MJ-1023 (Console type):
Only the update of "Finisher firmware" is needed.
- MJ-1024 (Console type with the saddle stitcher):
Two kinds of update "Finisher firmware" and "Saddle stitcher firmware" are needed.

- (1) Install the ROM to the download jig.
Make sure the direction is correct (P.6-3 "K-PWA-DLM-320").
- (2) Shut down the equipment.
- (3) Take off the finisher rear cover.

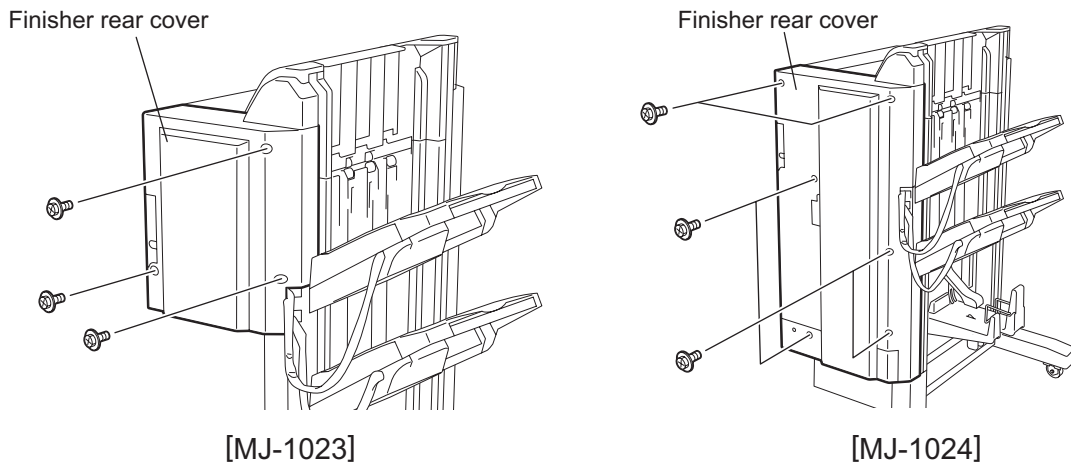


Fig.6-16

- * Connect the finisher interface cable with the equipment after removing the finisher rear cover.

- (4) Connect the download jig with the jig connector on the finisher control PC board.

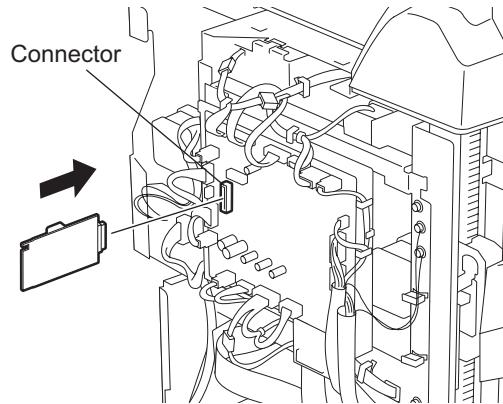


Fig.6-17

- (5) Change the setting of the DIP switch on the finisher control PC board.
Change the setting of the DIP switch as follows according to the firmware to be updated.

Note:

Record the current settings of the DIP switch before changing them. After the updating is completed, return the DIP switch to the status as record.

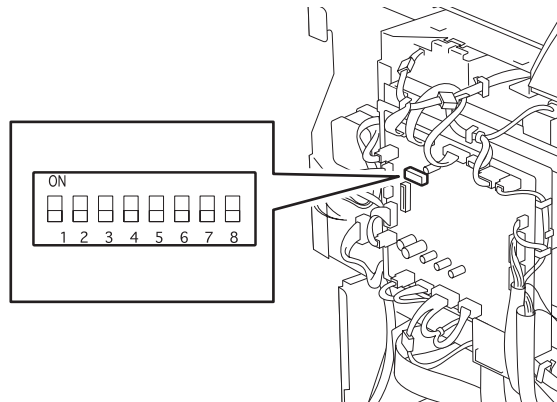


Fig.6-18

<Updating Finisher Firmware>

Change all the setting of the DIP switch (1-8) to OFF.

<Updating Saddle Sticher Firmware>

Change the setting of the DIP switch 1-6 to OFF and 7-8 to ON.

- (6) Turn ON the power while [0] button and [8] button are pressed simultaneously. Updating starts automatically and the LED on the download jig lights.

Important:

The processing status can be confirmed by the lighting of the LED (LED 101-103) on the finisher control board.

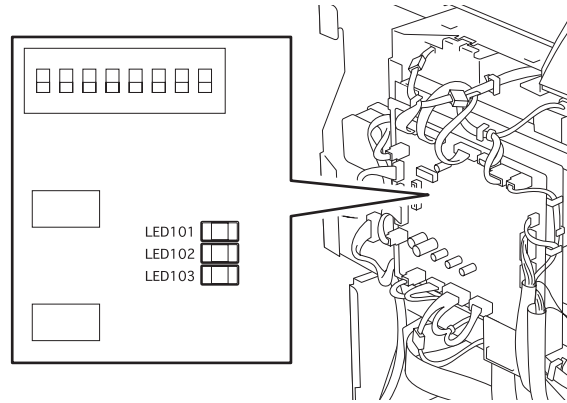


Fig.6-19

| Processing status | LED | | |
|-------------------|--------|--------|--------|
| | LED103 | LED102 | LED101 |
| 0% or above | OFF | OFF | ON |
| 15% or above | OFF | ON | OFF |
| 30% or above | OFF | ON | ON |
| 45% or above | ON | OFF | OFF |
| 60% or above | ON | OFF | ON |
| 75% or above | ON | ON | OFF |
| 90% or above | ON | ON | ON |

- (7) After the update is completed properly, the LED on the download jig blinks slowly (at interval of 0.8 sec). The LED starts blinking in approx. 30 sec. (finisher section) or 2 min. 30 sec. (saddle stitcher section) since the update starts. It is assumed that the update is failed if it does not start blinking even though 1 min. has passed (finisher section) or 3 min. (saddle stitcher section), or LED flashes fast (at interval of 0.1 sec.). In this case, turn OFF the power and check the following items. Then, clear the problem and restart updating from the beginning.
- Is the download jig connected properly?
 - Is the ROM installed to the download jig properly?
 - Is the updating data written on the ROM of the download jig properly?
 - Do the download jig and the equipment operate properly?
 - Is the DIP switch on the finisher control PC board set properly according to the download section (finisher or saddle stitcher)?
- (8) Turn OFF the power, remove the download jig and return the DIP switch to the status before updating.
- (9) Install the finisher rear cover.

<Updating FAX ROM>

Important:

- Before updating the FAX ROM, make sure to print out the current Function list for maintenance, Function list (ADMIN), Phone book number information and Group number information. In case the updating is failed and the registered information of the users is lost for some reason, re-register the user information referring to the lists and recover it.
 - Confirm the following items before turning OFF the power of the equipment. Turning OFF the power may clear the data below.
 - Confirm that the "MEMORY RX" LED is OFF and there are no memory reception data.
 - Print the "Mailbox/Relay box report" and then confirm that there are no F code data.
 - Press the [JOB STATUS] button to display the screen and then confirm that there are no memory transmission data.
- (1) Install the ROM to the download jig. Make sure the direction is correct (P.6-3 "K-PWA-DLM-320").
 - (2) Shut down the equipment.
 - (3) Take off the connector cover.

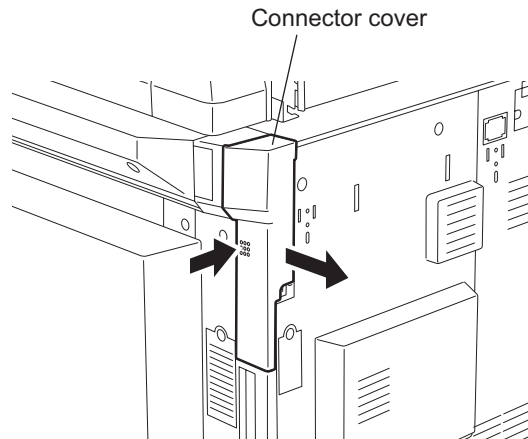


Fig.6-20

- (4) Remove the cover plate.

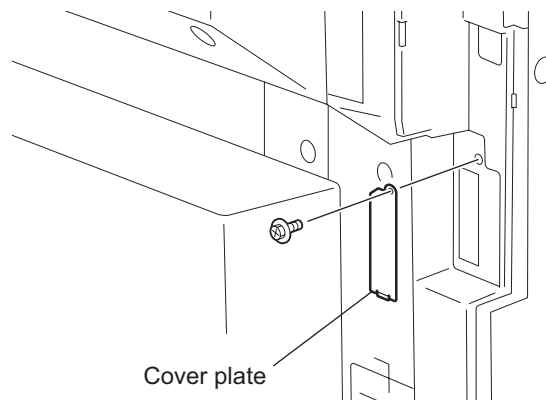


Fig.6-21

- (5) Connect the download jig with the jig connector (CN602) on the FAX board.

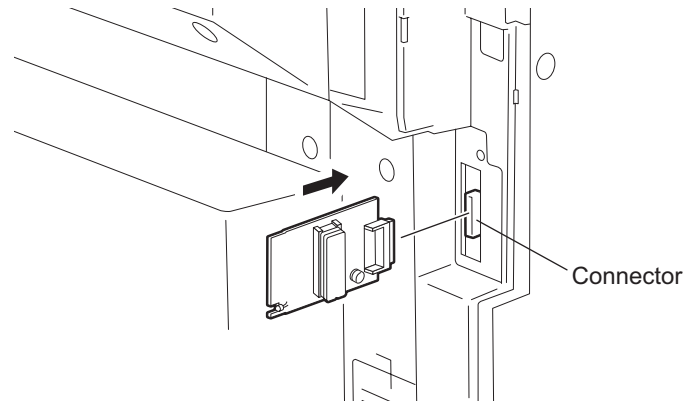


Fig.6-22

- (6) Turn ON the power while [0] button and [8] button are pressed simultaneously. Updating starts automatically and the LED on the download jig lights.
- (7) After the update is completed properly, the LED on the download jig blinks. The LED starts blinking in approx. 30 sec. since the update starts. It is assumed that the update is failed if it does not start blinking even though 1 min. has passed. In this case, turn OFF the power and check the following items. Then, clear the problem and restart updating from the beginning.
- Is the download jig connected properly?
 - Is the ROM installed to the download jig properly?
 - Is the updating data written on the ROM of the download jig properly?
 - Do the download jig and the equipment operate properly?
- (8) Turn OFF the power, remove the download jig and install the cover plate and the connector cover.
- (9) In the FAX Clearing Mode, perform the "FAX Set Up".
- Confirm the destination setting is correct in the Setting Mode (08).
08-201: Destination setting of the equipment
08-701: Destination setting of the FAX machine
 - Turn ON the power while [1] button and [*] button are pressed simultaneously.
 - Key in "100".
 - Press the [START] button.

Notes:

If the equipment does not work properly after the operation (9), follow the procedure below and then perform the "Clearing the image data" in the FAX Clearing Mode to erase the image data in the memory.

- Confirm the destination setting is correct in the Setting Mode (08).
08-201: Destination setting of the equipment
08-701: Destination setting of the FAX machine
- Turn ON the power while [1] button and [*] button are pressed simultaneously.
- Key in "102".
- Press the [START] button.

[B] Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data was overwritten properly.

<Updating Engine ROM>

08-903: Engine ROM version

<Updating Scanner ROM>

08-905: Scanner ROM version

<Updating RADF ROM>

08-907: RADF ROM version

<Updating Finisher ROM>

08-908: Finisher ROM version

<Updating FAX ROM>

08-915: FAX ROM version

6.2 Firmware Updating with USB Storage Device


In this equipment, it is feasible to update the firmware by connecting the USB storage device on which the firmware data is written to the USB connector mounted on the system control PC board and turning ON the power.

The type of firmware to be updated can be selected on the LCD screen in this method. This allows to update only the necessary firmware individually or to update all firmware in a batch.

The type of firmware which can be updated with this method are as follows in the table below.

| Firmware | Stored | Model specific folder name | Data file name |
|-------------|---|----------------------------|--|
| Master data | Hard disk | 28_451C | 1, 2, 3 ... n * The file name should be consecutive numbers from 1 to "n" without file extension. The capacity of each file is approx. 8 MB. However, the file capacity of "n" (last number) may be less than 8 MB. |
| System ROM | System control PC board (SYS board) | | firImage0.bin, firImage1.bin |
| Engine ROM | Logic PC board (LGC board) | | firImage2.bin |
| Scanner ROM | Scanning section control PC board (SLG board) | | |

Important:

- Only the USB storage device which meets the following conditions should be used for updating. Be careful since updating with any device other than the above is never guaranteed.
 - A combination USB storage device with a flash memory (to be connected directly to the USB port) and its capacity is between 64 MB to 512 MB (or 1 GB).
 - Operation of the USB storage device used for updating has been confirmed at the input check of this equipment (Test mode 03).
( P.2-25 "2.2.1 Input check (Test mode 03)")
 - A USB storage device which is complied with the following standards regulated by USB-IF (USB Implementers Forum)
 - Class number: 8 (=08h) (Mass-storage class)
 - Sub-class number: 6 (=06h) (SCSI transfer command set)
 - Protocol number: 80 (=50h) (Bulk-Only)
 - * Most common USB storage devices are complied with the specification above and can be used for updating. However, the operation in all the Multi Functional Digital Color Systems and Multi Functional Digital Systems is not necessarily guaranteed since the most of these devices are developed based on the use in PC environment (Windows or Macintosh). Therefore, confirm thoroughly that the device is operational in the equipment for which the updating will be performed when purchasing the device.
- The data file for updating is stored in the model specific folder.
Never change the model specific folder name since it is used for discriminating the data file when the updating data files for multiple models are stored in the USB storage device.
- Store the model specific folder in the root directory of the USB storage device.
- Storing the data file directly in the root directory is possible when the updating data files for one specific model is stored in the USB storage device.
However, if the model specific folder for the same model as that of the data file stored in the root directory already exists, the model specific folder will have the priority.
- The USB storage device complied with USB1.1 and USB2.0 can be used for updating. However, the update is performed in the speed of USB1.1 when the device complied with USB2.0 is used.
- Do not update the firmware by any storage device other than a flash memory (such as a USB connection type memory card reader, CD/DVD drive or hard disk) since it is never guaranteed.

[A] Update procedure

Important:

- The file system of USB storage device should be formatted in FAT format. Be careful since the devices formatted in FAT32 or NTFS format will not be operated. The file system can be confirmed on the properties in applications such as Explorer of Windows.
- Do not turn OFF the power during the update. The data could be damaged and not to be operated properly.

- (1) Connect the USB storage device to the PC and write the model specific folder in which the data file is stored.
 - Confirm the model specific folder name and data file name before writing the data (📖 P.6-26 "6.2 Firmware Updating with USB Storage Device").
 - The file system of USB storage device should be formatted in FAT format.
 - Windows 95 and NT do not support USB. Be careful since the data can not be written on the devices in the PCs with these operating systems.
- (2) Shut down the equipment.
- (3) Take off the cover plate.

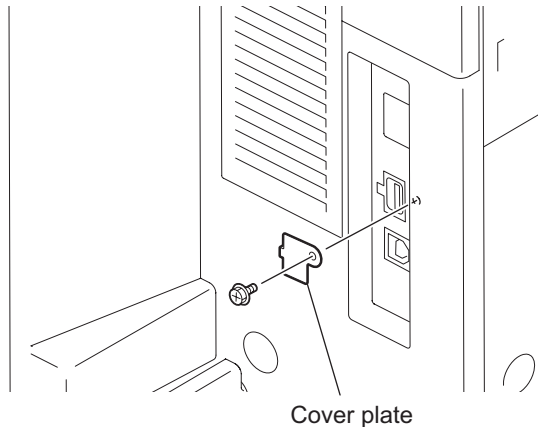


Fig.6-23

- (4) Connect the USB storage device to the USB connector (host) on the SYS board.

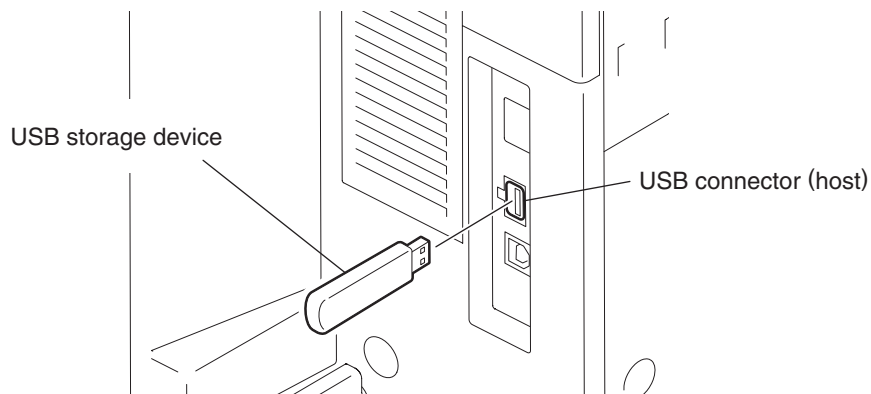


Fig.6-24

- (5) Turn ON the power while [4] button and [9] button are pressed simultaneously. The screen for selecting the items to be updated is displayed after 3 minutes. "*" is displayed next to the items to be updated. (All items other than "0. OS Update" are selected in the default settings.)

| Download Storage Firmware Update Mode Select Update Item | Version in update media |
|---|---------------------------|
| 0. OS Update | UIF Version... Vxxx.xxx.x |
| *1. HDD Update | UI0 Version... Vxxx.xxx.x |
| *2. UI Data Update | UI1 Version... Vxxx.xxx.x |
| *3. System Firmware Update | SYS Version... Vxxx.xxx.x |
| *4. Engine Firmware Update | ENG Version... xxxxx-xx |
| *5. Scanner Firmware Update | SCN Version... xxxxx-xx |

Note:

The display of items on this screen varies depending on the types of data written on the USB storage device. Each item is displayed only when each data file is written on the USB storage device in the following conditions.

| Item | Condition |
|----------------------------|--|
| 0. OS Update | firmImage0.bin is written. |
| 1. HDD Update | All master data files (1, 2, 3 ... n) are written. |
| 2. UI Data Update | firmImage0.bin is written. |
| 3. System Firmware Update | firmImage0.bin and firmImage1.bin are written. |
| 4. Engine Firmware Update | firmImage2.bin is written. |
| 5. Scanner Firmware Update | firmImage2.bin is written. |

If the USB storage device is not recognized properly, the following message is displayed. In this case, turn OFF the power of the equipment and connect the device properly. Then repeat the procedure from (5).

Please Set Correct USB Storage Device

If the updating data file does not exist or a data file for other model is stored, the following message is displayed. In this case, turn OFF the power of the equipment and confirm if the data file stored in the USB storage device is correct. Then repeat the procedure from (5).

-----WARNING: ROMDATA MISMATCH!!-----
ROMDATA Version is V***.*** *
Please REBOOT to use Correct ROMDATA

If you still want to continue, Please Push Start Key

- (6) Select the item with the digital keys.
 “*” is displayed next to the selected item. Display or delete the “*” by pressing the number of the item. All items are selected in the default settings.
- Select all items to update the firmware of the equipment in a batch.
 - Select items as follows to update individually.

<Updating OS data>
 Select “0. OS Update” only.

<Updating Master data>
 Select “1. HDD Update” only.

<Updating System ROM>
 Select “2. UI Data Update” and “3. System Firmware Update”.

<Updating Engine ROM>
 Select “4. Machine Firmware Update” only.

<Updating Scanner ROM>
 Select “5. Scanner Firmware Update” only.

Example: Updating the master data and system ROM

| Download Storage Firmware Update Mode Select Update Item | Version in update media |
|---|---------------------------|
| *0. OS Update | UIF Version... Vxxx.xxx.x |
| *1. HDD Update | UI0 Version... Vxxx.xxx.x |
| *2. UI Data Update | UI1 Version... Vxxx.xxx.x |
| *3. System Firmware Update | SYS Version... Vxxx.xxx.x |
| 4. Engine Firmware Update | ENG Version... xxxxx-xx |
| 5. Scanner Firmware Update | SCN Version... xxxxx-xx |

(Updating all the items is taken as an example and explained in the following procedures.)

- (7) Press the [START] button.
Updating starts and the processing status is displayed on the LCD screen.

```

Download Storage Firmware Update Mode

Download Board  -> FROM Update Start.  OS Update      .....
Check Devices   -  Completed           HD Data Update .....
Update Status   -  Installing
Data Check      -

Engine MAIN Update .. Flash Update
Scanner Firm Update .. Flash Update
  
```

| Status display during update | Status display when update is completed |
|------------------------------------|---|
| OS Update | OS Update Completed |
| HD Data Update | HD Data Update Completed |
| UI Data Update | UI Data Update Completed |
| SysFirm Update | SysFirm Update Completed |
| Engine MAIN Update .. Flash Update | Engine MAIN Update .. Completed |
| Scanner Firm Update.. Flash Update | Scanner Firm Update.. Completed |

- (8) "Update Completed." is displayed at the bottom of the LCD screen after the updating is completed properly.

```

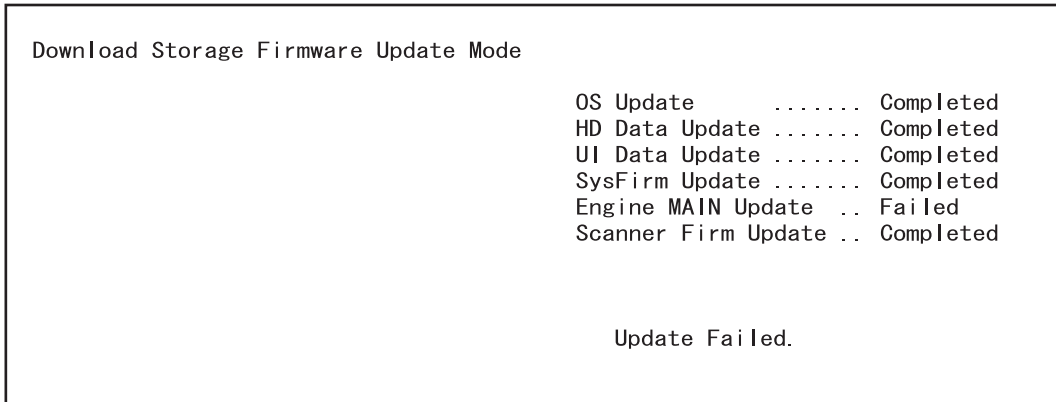
Download Storage Firmware Update Mode

OS Update      ..... Completed
HD Data Update ..... Completed
UI Data Update ..... Completed
SysFirm Update ..... Completed
Engine MAIN Update .. Completed
Scanner Firm Update .. Completed

Update Completed.
  
```


“Update Failed.” is displayed at the bottom of the LCD screen when the updating is not completed properly. “Failed” appears next to the failed item on the status display. Turn OFF the power, and then check the following items. After confirming and clearing the problems, restart updating from the beginning.

- Does the USB storage device meet the conditions to be used for updating (📖 P.6-26 "6.2 Firmware Updating with USB Storage Device")?
- Is the data file written properly on the USB storage device?
- Is the USB storage device installed properly?
- Do the USB storage device and equipment operate properly?



- (9) Turn OFF the power, remove the USB storage device and install the cover plate.
- (10) Perform the initialization of the updating data.
 - Turn ON the power while [0] button and [8] button are pressed simultaneously.
 - Key in “947”, and then press the [START] button.
 - Press the [INITIALIZE] button.

[B] Confirmation of the updated data

After the updating is completed, check each data version in the Setting Mode (08) to confirm that the data was overwritten properly.

<Updating Master data>

08-924: Version of UI data language 1 in HDD
08-925: Version of UI data language 2 in HDD
08-926: Version of UI data language 3 in HDD
08-927: Version of UI data language 4 in HDD
08-928: Version of UI data language 5 in HDD
08-929: Version of UI data language 6 in HDD
08-931: Version of UI data language 7 in HDD
08-933: HDD unit data version
08-934: Version of Web UI data language 1 in HDD
08-935: Version of Web UI data language 2 in HDD
08-936: Version of Web UI data language 3 in HDD
08-937: Version of Web UI data language 4 in HDD
08-938: Version of Web UI data language 5 in HDD
08-939: Version of Web UI data language 6 in HDD

<Updating System ROM>

08-900: System ROM version
08-922: UI data fixed section version
08-923: UI data common section version
08-930: Version of UI data in FROM displayed at power ON

<Updating Engine ROM>

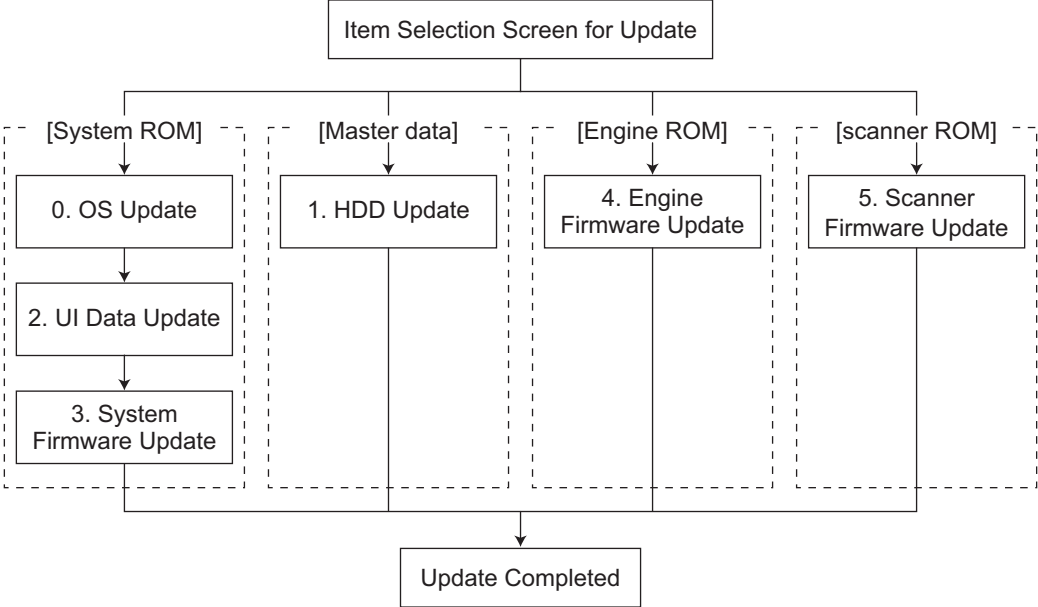
08-903: Engine ROM version

<Updating Scanner ROM>

08-905: Scanner ROM version

[C] Display during the update

Update is performed in parallel as shown in the transition diagram below.



Below is an example of the changes of the LCD screen during update.
Note that the screen order may be different from the actual one, because a parallel update is performed in the process.

Turn ON the power while [4] button and [9] button are pressed simultaneously

↓ The initial screen is displayed and the recognition of the USB storage device connected to the equipment is started.

```
Download Storage Update Mode
Please wait ... now Initialization
```

↓ When the device is recognized properly, the screen for selecting update items is displayed.

```
Download Storage Firmware Update Mode   Version in update media
Select Update Item

*0. OS Update                            UIF Version... Vxxx.xxx x
*1. HDD Update                           UI0 Version... Vxxx.xxx x
*2. UI Data Update                       UI1 Version... Vxxx.xxx x
*3. System Firmware Update              SYS Version... Vxxx.xxx x
*4. Engine Firmware Update              ENG Version... xxxxx-xx
*5. Scanner Firmware Update             SCN Version... xxxxx-xx
```

↓ Select items to be updated and press the [START] button to start updating the [System ROM], [Master Data], [Engine ROM] and [Scanner ROM] in parallel.

```

Download Storage Firmware Update Mode

Download Board   -> FROM Update Start.  OS Update      ..... Completed
Check Devices   -   Completed          HD Data Update .....
Update Status   -   Installing
Data Check      -

Download Storage -> HDD copying          Engine MAIN Update .. Flash Update
                  1/n                   Scanner Firm Update .. Flash Update

Engine Update Status
xxxx/nnnnn
Scanner Update Status
xxxx/nnnnn

```

↓ When the [System ROM]-[OS Update] has been updated, "OS Update...Completed" is displayed and the [UI Update] update will start.

```

Download Storage Firmware Update Mode

Download Board   -> FROM Update Start.  OS Update      ..... Completed
Check Devices   -   Completed          HD Data Update .....
Update Status   -   Installing          UI Data Update .....
Data Check      -

Download Storage -> HDD copying          Engine MAIN Update .. Flash Update
                  1/n                   Scanner Firm Update .. Flash Update

Engine Update Status
xxxx/nnnnn
Scanner Update Status
xxxx/nnnnn

```

↓ When the [System ROM]-[UI Update] has been updated, "UI Data Update...Completed" is displayed and the [System Firmware Update] update will start.

```

Download Storage Firmware Update Mode

Download Board   -> FROM Update Start.  OS Update      ..... Completed
Check Devices   -   Completed          HD Data Update .....
Update Status   -   Installing          UI Data Update ..... Completed
Data Check      -                      SysFirm Update .....
                                                Engine MAIN Update .. Flash Update
                                                Scanner Firm Update .. Flash Update

Download Storage -> HDD copying          Engine Update Status
                  1/n                   xxxx/nnnnn
                                                Scanner Update Status
                                                xxxx/nnnnn

```



When the [Engine ROM] has been updated, "Engine MAIN Update..Flash Update" is changed to "Engine MAIN Update..Completed".

```

Download Storage Firmware Update Mode

Download Storage -> FROM Update Start.  OS Update      ..... Completed
Check Devices   - Completed             HD Data Update .....
Update Status   - Installing            UI Data Update  ..... Completed
Data Check      -                        SysFirm Update .....
                                           Engine MAIN Update .. Completed
                                           Scanner Firm Update .. Flash Update

Download Storage -> HDD copying
                        1/n xxx/ yyy
                        2/n xxx/ yyy

Scanner Update Status
xxxx/nnnnn
  
```



When the [System ROM]-[System Firmware Update] has been updated, "SysFirm Update...Completed" is displayed.

```

Download Storage Firmware Update Mode

OS Update      ..... Completed
HD Data Update .....
UI Data Update  ..... Completed
SysFirm Update ..... Completed
Engine MAIN Update .. Completed
Scanner Firm Update .. Flash Update

Download Storage -> HDD copying
                        1/n xxx/ yyy
                        2/n xxx/ yyy
                        3/n
Scanner Update Status
xxxx/nnnnn
  
```

File name of master data ————

————— Total files

————— Copies



When the [Master Data] has been updated, "HD Data Update...Completed" is displayed.

```
Download Storage Firmware Update Mode

OS Update ..... Completed
HD Data Update ..... Completed
UI Data Update ..... Completed
SysFirm Update ..... Completed
Engine MAIN Update .. Completed
Scanner Firm Update .. Flash Update

Scanner Update Status
xxxx/nnnn
```



When the [Scanner ROM] has been updated, "Scanner Firm Update..Flash Update" is changed to "Scanner Firm Update..Completed".

When all data has been updated, "Update Completed" is displayed.

```
Download Storage Firmware Update Mode

OS Update ..... Completed
HD Data Update ..... Completed
UI Data Update ..... Completed
SysFirm Update ..... Completed
Engine MAIN Update .. Completed
Scanner Firm Update .. Completed

Update Completed.
```

- * If the USB storage device is not recognized properly, the following message is displayed and the update is interrupted.

Please Set Correct USB Storage Device

- * "Update Failed." is displayed at the bottom of the LCD screen when the updating is not completed properly. "Failed" appears next to the failed item on the status display.

Download Storage Firmware Update Mode

| | | |
|---------------------|-------|-----------|
| OS Update | | Completed |
| HD Data Update | | Completed |
| UI Data Update | | Completed |
| SysFirm Update | | Completed |
| Engine MAIN Update | .. | Failed |
| Scanner Firm Update | .. | Completed |

Update Failed.

Failed items

Error message

6.2.1 Appendix

[A] Assist Mode

This equipment has the Assist Mode to enable the following functions.

- (1) NVRAM flag clearing (“Clear NvRAM flags.”)
Even if the firmware downloading has been completed normally, the Recovery Mode may accidentally start up when the power is turned ON again. In this case, clear the NVRAM flags used in the download process with this function. (Normally, the flags are automatically cleared in the download process.)
Also in the case the Recovery Mode accidentally starts up after the replacement of NVRAM on the SYS board, the flags are cleared with this function.
- (2) Data storage partition formatting (“Format Loader Partition.”)
When a deflection occurs on the UI data, etc. which are stored in the HDD, the partition with the stored UI data, etc. is formatted with this function. (Do not use this function since it is not normally necessary.)
- (3) HDD partition creation (“All Partition Delete and Create Loader Partition.”)
When the HDD is replaced or UI data, etc. are downloaded using the USB storage, it is necessary to format a partition in the HDD before downloading. In this case, the partition is created in the HDD with this function.

Notes:

1. When downloading with a download jig, it is not necessary to format a partition in advance.
2. Perform the HDD partition formatting only when a new HDD and scrambler board are installed since all data in the current HDD are erased by this operation.

[B] Operating Procedure of Assist Mode

- (1) Turn ON the power while [3] button and [CLEAR] button are pressed simultaneously.
 - The following screen is displayed.

```
Firmware Version Up Mode

Select Number (1-3) and Press START key.

> 1 : Clear NvRAM flags.
   2 : Format Loader partition.
   3 : All Partition Delete and Create Loader Partition.
```

- (2) Select the item with the digital keys and press the [START] button.

7. POWER SUPPLY UNIT

7.1 Output Channel

The followings are three output channels which are not linked with the cover switch.

1) +3.3V

- +3.3VA: CN464 Pins 9, 10 and 11
Output to the SYS board
- +3.3VB: CN464 Pins 15 and 16
Output to the SYS board
- +3.3VB: CN466 Pin 3
Output to the LGC board
- +3.3VB: CN467 Pins 17 and 18
Output to the SLG board

2) +5.1V

- +5.1VA: CN464 Pins 21, 22, 23 and 24
Output to the SYS board
- +5.1VB: CN464 Pin 19
Output to the SYS board
- +5.1VB: CN466 Pin 1
Output to the LGC board, PFP/LCF (via LGC board), Bridge unit (via LGC board)
- +5.1VB: CN467 Pins 5 and 6
Output to the RADF
- +5.1VB: CN467 Pins 21 and 22
Output to the SLG board
- +5.1VB: CN468 Pin 4
Output to the finisher
- +5.1VB: CN469 Pin 5
Output to the FIL board

3) +12V

- +12VA: CN464 Pin 5
Output to the SYS board
- +12VB: CN464 Pin 3
Output to the SYS board
- +12VB: CN466 Pin 16
Output to the LGC board
- +12VB: CN471 Pin 1
Output to the FAX unit

The followings are two output channels which are linked with the cover switch.

1) +5.1V

+5.1VD: CN466 Pin 11
Output to the LGC board

2) +24V

+24VD1: CN465 Pins 1 and 2
Output to the LGC board, Bridge unit (via LGC board)
+24VD1: CN469 Pins 1 and 2
Output to the PFP/LCF
+24VD1: CN470 Pin 1
Output to the power supply cooling fan
+24VD2: CN465 Pins 5 and 6
Output to the DRV board
+24VD3: CN467 Pins 1 and 2
Output to the RADF
+24VD4: CN467 Pins 10, 12 and 14
Output to the SLG board
+24VD5: CN468 Pin 2
Output to the finisher

Output voltage by the type of connector

Main switch line

| Connector | Destination | Voltage |
|-----------|---|--|
| CN464 | SYS board | +3.3VA, +3.3VB, +5.1VA, +5.1VB, +12VA, +12VB |
| CN466 | LGC board, PFP/LCF (via LGC board), Bridge unit (via LGC board) | +3.3VB, +5.1VB, +12VB |
| CN467 | SLG board, RADF | +3.3VB, 5.1VB |
| CN468 | Finisher | +5.1VB |
| CN469 | FIL board | +5.1VB |
| CN471 | FAX unit | +12VB |

Cover switch line

| Connector | Destination | Voltage |
|-----------|--|----------------|
| CN465 | LGC board, DRV board, PFP/LCF (via LGC board), Bridge unit (via LGC board) | +24VD1, +24VD2 |
| CN466 | LGC board | +5.1VD |
| CN467 | SLG board, RADF | +24VD3, +24VD4 |
| CN468 | Finisher | +24VD5 |
| CN469 | PFP/LCF | +24VD1 |
| CN470 | Power supply cooling fan | +24VD1 |

7.2 Fuse

When the power supply secondary fuse is blown out, confirm that there is no abnormally with each part using the following table.

| Voltage | Board/Unit | Part | Fuse type |
|-----------------------|--------------------------|--|-----------------------|
| +24VD1 | LGC | Polygonal motor | F3:8A (Semi time-lag) |
| | | Tray-up motor | |
| | | ADU motor | |
| | | Main motor | |
| | | Developer motor | |
| | | Transport motor | |
| | | Drum cleaner brush motor | |
| | | Transfer belt cleaner auger motor | |
| | | Toner motor | |
| | | Laser unit cooling fan | |
| | | IH control board cooling fan | |
| | | Ozone exhaust fan | |
| | | Internal cooling fan | |
| | | 2nd transfer roller contact clutch | |
| | | Bypass feed clutch | |
| | | Registration clutch | |
| | | Upper transport clutch (high speed) | |
| | | Upper transport clutch (low speed) | |
| | | Lower transport clutch (high speed) | |
| | | Lower transport clutch (low speed) | |
| | | Upper drawer feed clutch | |
| | | Lower drawer feed clutch | |
| | | ADU clutch | |
| | | Color developer toner supply clutch | |
| | | Color developer drive clutch | |
| | | Black developer drive clutch | |
| | | Black developer lifting clutch | |
| | | Transfer belt cleaner contact clutch | |
| | | Bypass pickup solenoid | |
| | | Image quality sensor shutter solenoid | |
| | | Color auto-toner sensor shutter solenoid | |
| | | Discharge LED | |
| | | Key copy counter / Copy key card | |
| Charger cleaner motor | | | |
| Power supply | Power supply cooling fan | | |
| PFP/LCF | | | |
| Bridge unit | | | |
| +24VD2 | DRV | Revolver motor | F4:8A (Semi time-lag) |
| | | Exit motor | |
| +24VD3 | RADF | | |
| +24VD4 | SLG | Exposure lamp (lamp inverter) | F5:8A (Semi time-lag) |
| | | CCD drive circuit (CCD board) | |
| | | Scanner unit cooling fan | |
| | | Scan motor | |
| +24VD5 | Finisher | | |

7.3 Configuration of Power Supply Unit

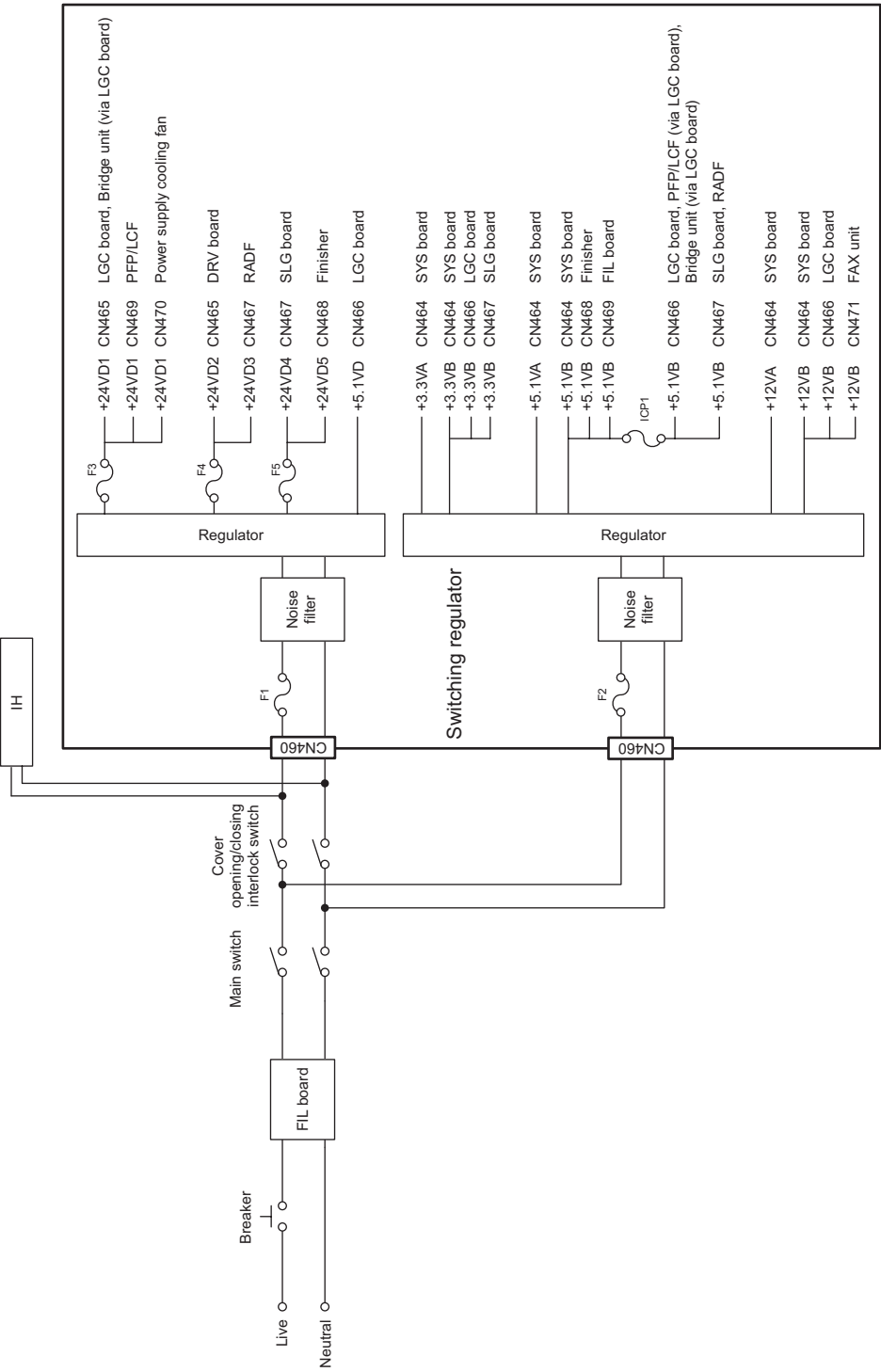


Fig.7-1

8. REMOTE SERVICE

There are following functions as Remote Service.

- (1) Auto Supply Order
Automatically orders the toner and used toner container by FAX or E-mail.
- (2) Service Notification
Notifies the status of the equipment to the service technician by E-mail or FAX.

8.1 Auto Supply Order

8.1.1 Outline

Automatically orders the toner and used toner container.

- (1) Placing an Order
There are two ways to place an order.
 - FAX
Installation of the FAX board is required.
If the FAX board has not been installed, it is regarded as OFF setting.
 - E-mail (E-mail body + TIFF image)
- (2) Order Intervals
When the toner empty occurs, the number of occurrences is counted. And when it reaches the specified number for CONDITION, the order is placed automatically.
With regard to the used toner container, it is done according to the number of the used toner container full detection.
The number of the CONDITION can be set respectively for the toner and used toner container.
- (3) If Order Failure Occurs
If some problems occur and the order cannot be placed after registering an order as a job, refer to the standard countermeasure for the FAX/E-mail transmission failure.

8.1.2 Setting Item

To enable Auto Supply Order, the following settings are required.

Note:

When selecting E-mail to place an order, it is required that sending and receiving E-mails are available. Confirm the details to the administrator.

(1) Self-diagnosis (08) Setting

As the default setting, the Auto Supply Order setting screen is not displayed on the touch panel. To display it, switching the Valid/Invalid setting (08-765) is required.

0: Valid (FAX/Internet FAX)

1: Valid (FAX/Internet FAX/HTTP)*

2: Invalid (Default)

When changing the setting value from "2" (default) to "0", the Auto Supply Order setting screen is displayed. (* HTTP has not been supported yet.)

(2) Touch Panel Setting

Each item is set from the Auto Supply Order screen on the touch panel.

Entering the password and customer information is required because the setting is made from the ADMIN screen. Setting it with the administrator is a must.

- Basic setting

[ADMIN] > [SERVICE] > [SUPPLY ORDER SETUP] > [ORDER INFORMATION]

| | |
|-------------------|--|
| AUTO SUPPLY ORDER | Ordered by: [FAX], [MAIL], [HTTP] (*1) |
| FAX NUMBER | FAX number of supplier (*2) |
| E-MAIL | E-mail address of supplier (*3) |
| CUSTOMER | Customer information |
| NAME | |
| TEL NUMBER | |
| E-MAIL | |
| ADDRESS | |
| SUPPLIER | Supplier information |
| NAME | |
| ADDRESS | |
| SERVICE TECNICIAN | Service technician information |
| NUMBER | |
| NAME | |
| TEL NUMBER | |
| E-MAIL | |

*1 HTTP has not been supported yet.

*2 Even when "FAX" is selected, the order is not placed without entering the FAX number.

*3 Even when "MAIL" is selected, the order is not placed without entering the E-mail address.

- Detailed setting for the order

[ADMIN] > [SERVICE] > [SUPPLY ORDER SETUP] > [TONER ORDERING]

| | |
|-------------------|---|
| ***** TONER ORDER | Order information (TONER /USED TONER CONTAINER) |
| PART NUMBER | Part number to be ordered |
| CONDITIOIN | The number of conditions (*) |
| QUANTITY | The quantity to be ordered |
| AUTO ORDER | ON/OFF setting of order for each part |

- * The order is placed when the number of replacement reaches the number specified for the CONDITION.

- FAX number of this equipment (common information)

[ADMIN] > [FAX] > [TERMINAL ID]

| | |
|------------|------------------------------|
| ID NAME | ID name of this equipment |
| FAX NUMBER | FAX number of this equipment |

- E-mail information of this equipment (common information)

[ADMIN] > [E-MAIL]

| | |
|--------------|--------------------------------------|
| FROM ADDRESS | E-mail address of this equipment (*) |
| FROM NAME | E-mail username of this equipment |

- * When sending an E-mail, validity of the address is checked. If the address is invalid, it is not sent.

- (3) Output of setting list of the Auto Supply Order Keying in the following buttons and keys prints the setting list.

[USER FUNCTIONS] [USER] [LISTS] [*] [#] [*] [*] [3] [8] [START]

8.1.3 Setting procedure

- (1) Start up the self-diagnosis setting mode 08-765, and then change the setting value to "0".
- (2) Turn the power OFF, and then ON.
- (3) Press the [USER FUNCTIONS] button to enter the user function screen.
- (4) Press the [ADMIN] button.
 - When the Administrator Password has been set, ADMINISTRATOR PASSWORD screen is displayed.

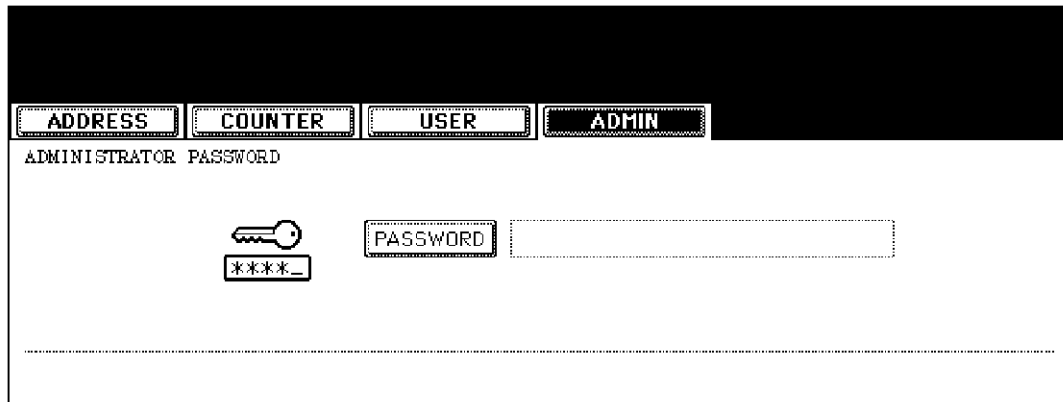


Fig.8-1

- (5) Press the [PASSWORD] button and the screen is switched to a full keyboard. Then key in the Administrator Password and press the [ENTER] button.
 - * Confirm the password to the administrator.



Fig.8-2

- (6) Press the [SERVICE] button in the ADMIN screen.

(7) The SERVICE screen is displayed.

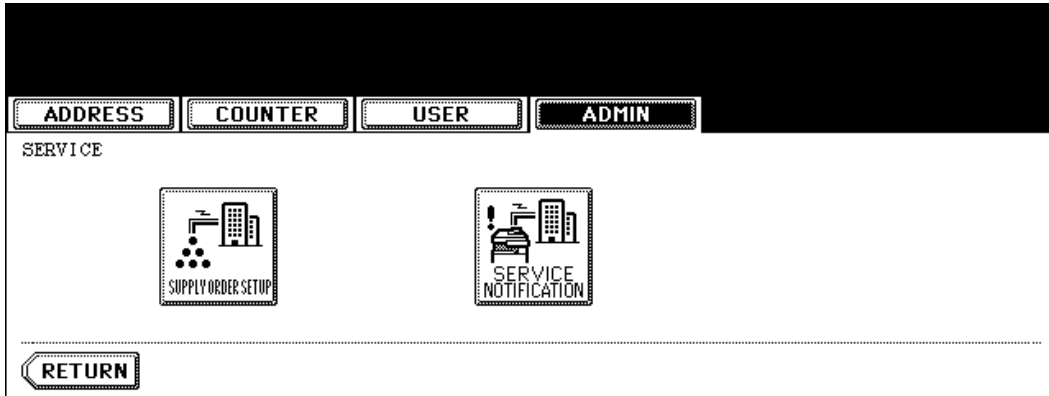


Fig.8-3

(8) Press the [SUPPLY ORDER SETUP] button.

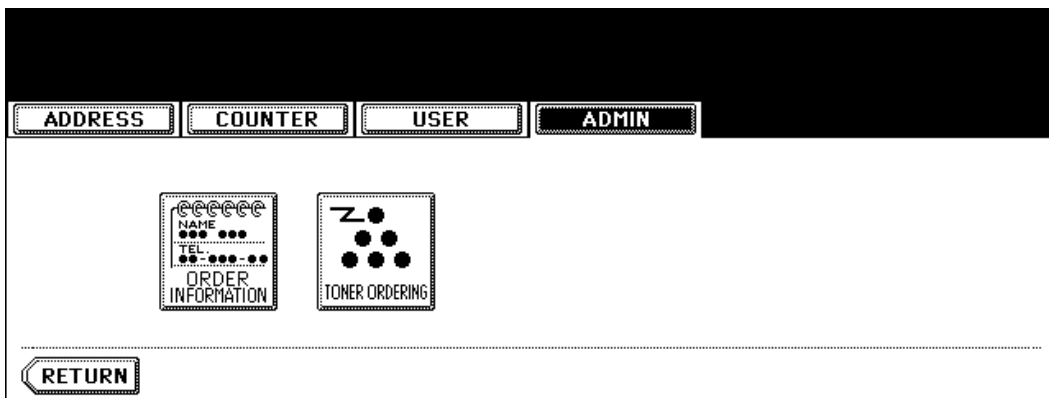


Fig.8-4

(9) Press the [ORDER INFORMATION] button.

(10) The ORDER INFORMATION screen is displayed.

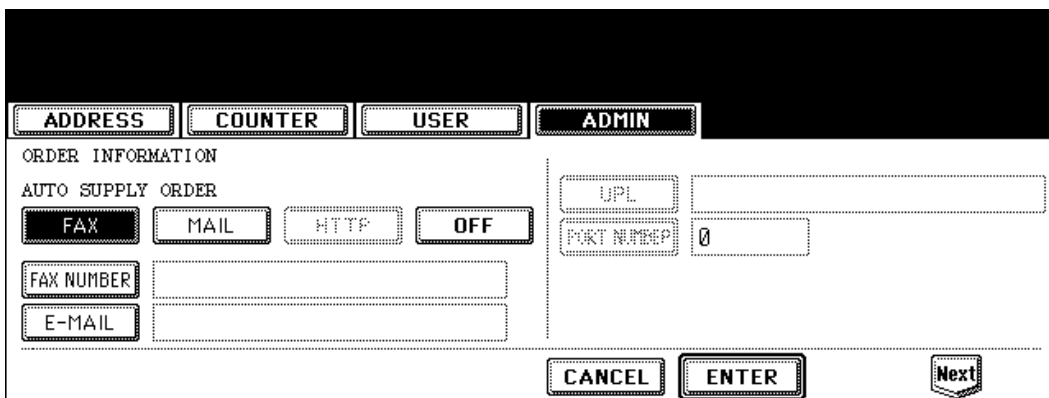


Fig.8-5

- (11) Press the buttons on the screen of ORDER INFORMATION to set the required item.
 [FAX]/[MAIL]/[OFF] Select the [FAX] or the [MAIL] button for the transmitting way of order.
 (HTTP has not been supported yet.)
 [OFF]: Turn off the AUTO SUPPLY ORDER function.

[FAX NUMBER] Input the FAX number of supplier.
 (To transmit by FAX, the order cannot be placed automatically if you do not input the number.)

[E-MAIL] Input the E-mail address of supplier.
 (To transmit by E-mail, the order cannot be placed automatically if you do not input the address.)

- (12) Press the [NEXT] button.
 (Press the [ENTER] button to register, and then the screen returns to the (7) SERVICE screen.
 Press the [CANCEL] button to cancel this register, and then the screen returns to the (7) SERVICE screen.)

- (13) The CUSTOMER/SUPPLIER screen is displayed.

The screenshot shows a screen with a black header bar containing four buttons: ADDRESS, COUNTER, USER, and ADMIN. Below the header, the screen is divided into two columns. The left column is labeled 'CUSTOMER' and contains four input fields: NAME, TEL NUMBER, E-MAIL, and ADDRESS. The right column is labeled 'SUPPLIER' and contains two input fields: NAME and ADDRESS. At the bottom of the screen, there are three buttons: CANCEL, ENTER, and Next. To the right of the Next button is a 'Prev' button with a left-pointing arrow.

Fig.8-6

- (14) Press the buttons of the screen of CUSTOMER/SUPPLIER to set the required item.

CUSTOMER

[NAME] Input the name of customer.
 [TEL NUMBER] Input the telephone number of customer.
 [E-MAIL] Input the E-mail address of customer.
 [ADDRESS] Input the address of customer.

SUPPLIER

[NAME] Input the name of supplier.
 [ADDRESS] Input the address of supplier.

- (15) Press the [NEXT] button.

(16) The SERVICE TECHNICIAN/ RESULT PRINTING screen is displayed.

ADDRESS COUNTER USER ADMIN

SERVICE TECHNICIAN

NUMBER []

NAME []

TEL NUMBER []

E-MAIL []

DESCRIPTION []

RESULT PRINTING

OFF ALWAYS ON ERROR

CANCEL ENTER Prev

Fig.8-7

(17) Press a button on the screen of SERVICE TECHNICIAN/ RESULT PRINTING to set the required item.

SERVICE TECHNICIAN

- [NUMBER] Input the number of SERVICE TECHNICIAN.
- [NAME] Input the name of SERVICE TECHNICIAN.
- [TEL NUMBER] Input the telephone number of SERVICE TECHNICIAN.
- [E-MAIL] Input the E-mail address of SERVICE TECHNICIAN.
- [DESCRIPTION] Input the remarks if you want to register.

RESULT PRINTING

- [OFF] / [ALWAYS] / [ON ERROR]
- Whichever you press, the result list is printed.

(18) Press the [ENTER] button to register and complete the order information setting.

(19) The SERVICE screen is returned.

ADDRESS COUNTER USER ADMIN

SERVICE

SUPPLY ORDER SETUP

SERVICE NOTIFICATION

RETURN

Fig.8-8

(20) Press the [SUPPLY ORDER SETUP] button.

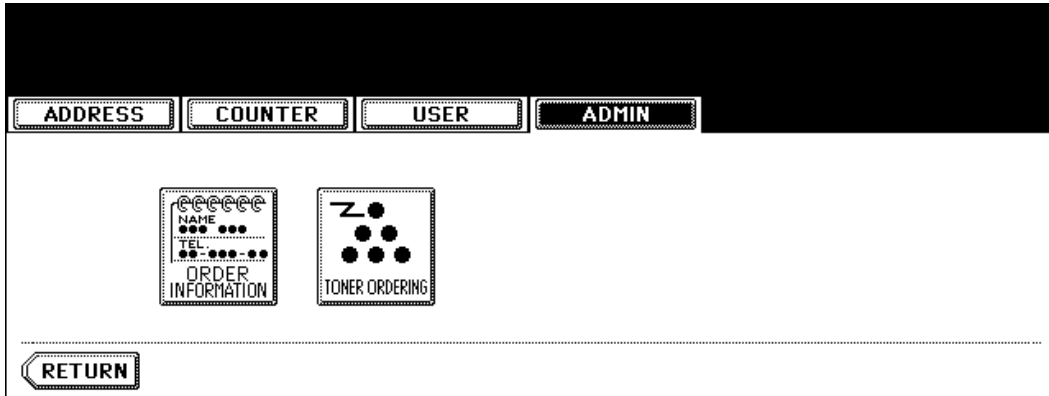


Fig.8-9

(21) Press the [TONER ORDERING] button.

(22) The TONER ORDERING screen is displayed.

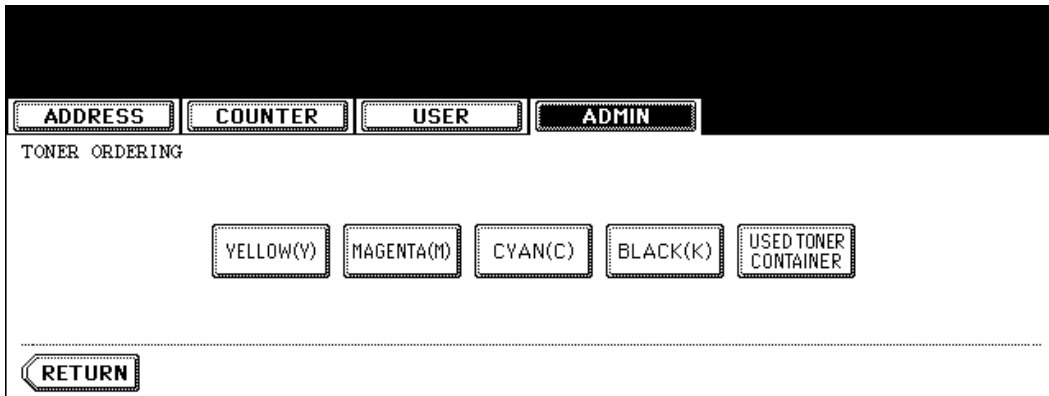


Fig.8-10

(23) Press the [YELLOW(Y)] button. (Select the part to be ordered.)

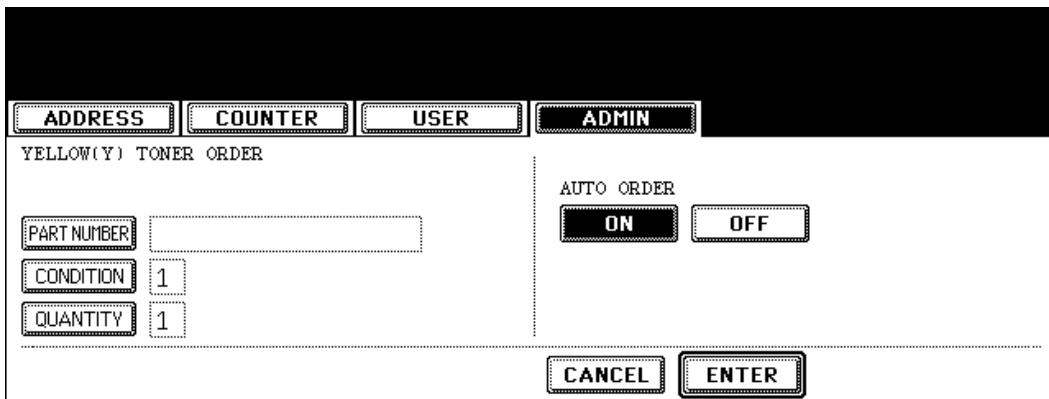


Fig.8-11

- (24) Input the order information of TONER.
 [PART NUMBER] Toner number
 [CONDITION] The order is placed when the number of toner empty reaches the number specified for the CONDITION.
 [QUANTITY] Quantity to be ordered

AUTO ORDER

[ON]/[OFF] Allows you to select whether each part to be ordered is placed automatically or not.

- (25) Press the [ENTER] button to register the setting of toner order.

- (26) The TONER ORDERING screen is displayed.

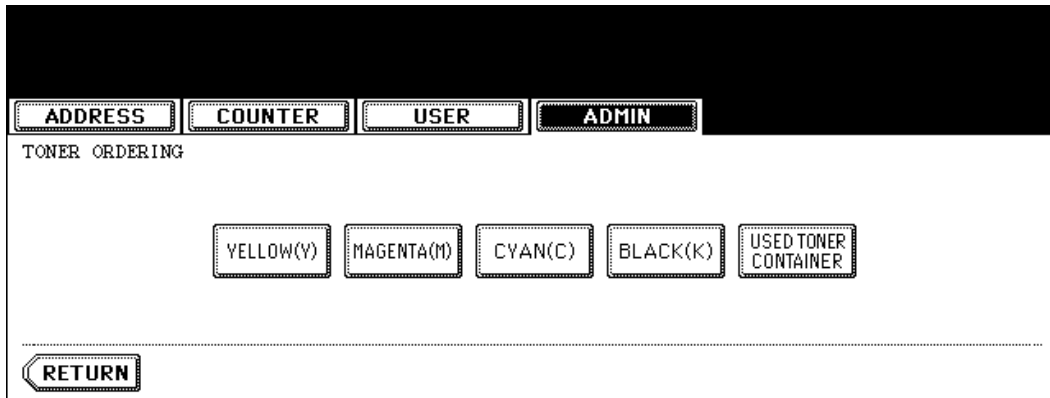


Fig.8-12

- (27) Press the [MAGENTA(M)] / [CYAN(C)] / [BLACK(K)] / [USED TONER CONTAINER] button, and then input the order information in the same way.

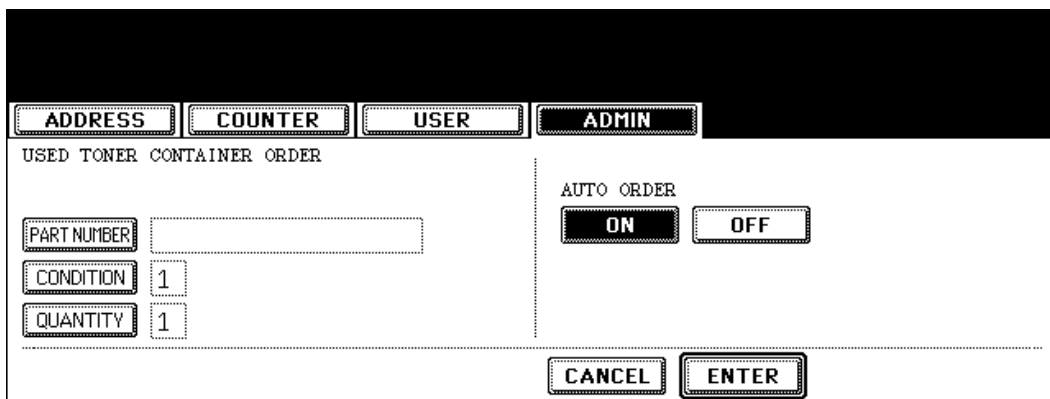


Fig.8-13

- (28) Press the [ENTER] button to register the order information.

- (29) The screen returns to the TONER ORDERING.

- (30) Press the [USER FUNCTION] button to be switched from the ADMIN screen on touch panel and returned to the BASIC screen, so that the setting of Auto Supply Order is finished.

Note:

Auto Supply Order setting is also available from the following setting mode (08).

| Items | 08 code | Contents |
|---|---------|---|
| The transmitting way of order [FAX]/[MAIL] / [OFF] | 732 | 0: Ordered by FAX 1: Ordered by E-mail 2: Ordered by HTTP 3: OFF |
| SUPPLIER [FAX NUMBER] | 733 | Maximum 32 digits |
| SUPPLIER [E-MAIL] | 734 | Maximum 192 letters |
| CUSTOMER [NAME] | 738 | Maximum 50 letters |
| CUSTOMER [TEL NUMBER] | 739 | Maximum 32 digits |
| CUSTOMER [E-MAIL] | 740 | Maximum 192 letters |
| CUSTOMER [ADDRESS] | 741 | Maximum 100 letters |
| SUPPLIER [NAME] | 746 | Maximum 50 letters |
| SUPPLIER [ADDRESS] | 747 | Maximum 100 letters |
| SERVICE TECHNICIAN [NUMBER] | 742 | Maximum 5 digits |
| SERVICE TECHNICIAN [NAME] | 743 | Maximum 50 letters |
| SERVICE TECHNICIAN [TEL NUMBER] | 744 | Maximum 32 digits |
| SERVICE TECHNICIAN [E-MAIL] | 745 | Maximum 192 letters |
| Remarks [DESCRIPTION] | 748 | Maximum 128 letters |
| RESULT PRINTING [OFF] / [ALWAYS] / [ON ERROR] | 764 | 0: OFF 1: Always 2: ON Error |
| YELLOW(Y) TONER [PART NUMBER] | 755 | Maximum 20 digits |
| YELLOW(Y) TONER [CONDITION] | 757 | 1-99 |
| YELLOW(Y) TONER [QUANTITY] | 756 | 1-99 |
| MAGENTA(M) TONER [PART NUMBER] | 752 | Maximum 20 digits |
| MAGENTA(M) TONER [CONDITION] | 754 | 1-99 |
| MAGENTA(M) TONER [QUANTITY] | 753 | 1-99 |
| CYAN(C) TONER [PART NUMBER] | 749 | Maximum 20 digits |
| CYAN(C) TONER [CONDITION] | 751 | 1-99 |

| Items | 08 code | Contents |
|---------------------------------------|---------|-------------------|
| CYAN(C) TONER [QUANTITY] | 750 | 1-99 |
| BLACK(K) TONER [PART NUMBER] | 758 | Maximum 20 digits |
| BLACK(K) TONER [CONDITION] | 760 | 1-99 |
| BLACK(K) TONER [QUANTITY] | 759 | 1-99 |
| USED TONER CONTAINER [PART NUMBER] | 761 | Maximum 20 digits |
| USED TONER CONTAINER [CONDITION] | 763 | 1-99 |
| USED TONER CONTAINER [QUANTITY] | 762 | 1-99 |

8.1.4 Order Sheet Format

The sample of order sheet is as follows.

- (1) FAX (This format is the same as that of TIFF image attached E-mail.)
 *1 Part not to be ordered is not output. (Less space between the lines)

```

DATE & TIME                :99-99-'99 99:99
CUSTOMER NUMBER            :XXX
CUSTOMER NAME              :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER ADDRESS           :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER TEL NUMBER        :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER E-MAIL ADDRESS    :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SERVICE TECHNICIAN TEL NUMBER :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SERVICE TECHNICIAN E-MAIL  :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SUPPLIER NAME              :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SUPPLIER ADDRESS           :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
-----
TONER CARTRIDGE           PART NUMBER      QUANTITY
CYAN                      :XXXXXXXXXXXXX      99
MAGENTA                   :XXXXXXXXXXXXX      99
YELLOW                    :XXXXXXXXXXXXX      99  (*1)
BLACK                     :XXXXXXXXXXXXX      99
USED TONER CONTAINER      :XXXXXXXXXXXXX      99
-----
DESCRIPTION AREA .....
.....

DEVICE DESCRIPTION        :XXXXXXXXXXXXXXXXXXXXXXXXXXXX
SERIAL NUMBER             :XXXXXXXXXXXXXXXXXXXXXXXXXXXX
DEVICE FAX NUMBER         :XXXXXXXXXXXXXXXXXXXXXXXXXXXX
DEVICE E-MAIL ADDRESS     :XXXXXXXXXXXXXXXXXXXXXXXXXXXX

PRINT COUNTER            TOTAL      BLACK      TWIN COLOR  FULL COLOR
SCAN COUNTER            999999999 999999999 999999999 999999999
                        999999999 999999999 999999999 999999999

```

Fig.8-14

(2) E-MAIL (TIFF image attached with the E-mail is the same format with that of the FAX order sheet.)

SUBJECT: SUPPLY ORDER REQUEST

*1 Part not to be ordered is not output. (Less space between the lines)

```

Date&Time: '05-06-14 00:17
Customer Number: S01 MachineName: TOSHIBA e-STUDIO451c
SerialNumber: 1234567890
Device FAX Number:
Device Email: aaa@linux.nam1.local
OrderInformation:
YELLOW PartNumber: YELLOW-03 Quantity:17
CounterInformation:
PrintCounter(Small) FullColor: 0 TwinColor: 0 Black: 141 } (*1)
PrintCounter(Large) FullColor: 0 TwinColor: 0 Black: 0
ScanCounter FullColor: 0 TwinColor: 0 Black: 7
  
```

Fig.8-15

(3) Result list

*1 Part not to be ordered is not output. (Less space between the lines)

```

                                ORDER XXXXXXXXXXXX
DATE & TIME                      :99-99-'99 99:99
CUSTOMER NUMBER                   :XXX
CUSTOMER NAME                     :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER ADDRESS                  :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER TEL NUMBER              :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER E-MAIL ADDRESS          :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SERVICE TECHNICIAN
TEL NUMBER                       :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SERVICE TECHNICIAN E-MAIL       :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SUPPLIER NAME                    :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SUPPLIER ADDRESS                 :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
-----
TONER CARTRIDGE                  PART NUMBER      QUANTITY
CYAN                             :XXXXXXXXXXXXX    99
MAGENTA                          :XXXXXXXXXXXXX    99
YELLOW                           :XXXXXXXXXXXXX    99 } (*1)
BLACK                             :XXXXXXXXXXXXX    99
USED TONER CONTAINER            :XXXXXXXXXXXXX    99
-----
DESCRIPTION AREA .....
.....
DEVICE DESCRIPTION                :XXXXXXXXXXXXXXXXXXXXXXXXXXXX
SERIAL NUMBER                    :XXXXXXXXXXXXXXXXXXXXXXXXXXXX
DEVICE FAX NUMBER                :XXXXXXXXXXXXXXXXXXXXXXXXXXXX
DEVICE E-MAIL ADDRESS           :XXXXXXXXXXXXXXXXXXXXXXXXXXXX
-----
PRINT COUNTER    TOTAL    BLACK    TWIN COLOR    FULL COLOR
999999999      999999999  999999999  999999999    999999999
SCAN COUNTER    999999999  999999999  999999999    999999999
  
```

Fig.8-16

8.2 Service Notification

8.2.1 Outline

This function automatically notifies the status of the equipment to the service technician by E-mail or FAX. The following three are the items to be notified.

- **Total Counter Transmit**
When this function is effective, it notifies each counter information periodically (on the set date and time every month).
- **Service Call Transmit (E-mail only)**
When this function is effective, it notifies the corresponding error code and such at a service call error.
- **PM Counter Transmit**
When this function is effective, it notifies that the PM timing has come when the present PM count has reached to its setting value, or the present PM driving count has reached to its setting value.

8.2.2 Setting

Note:

When using this function, it is required that sending and receiving E-mails or FAXes are available. Confirm the details to the administrator.

[1] Preparation

The screen to set this function is not displayed at the default setting.
Set this screen to be displayed with the following code (08).

- 08-774 Setting of notification display
0: Invalid (Default)
1: Valid

[2] Setting procedure

- (1) Press the [USER FUNCTIONS] button and select the [ADMIN] button. Then enter the password and press the [ENTER] button.
 - Confirm the password to the administrator.

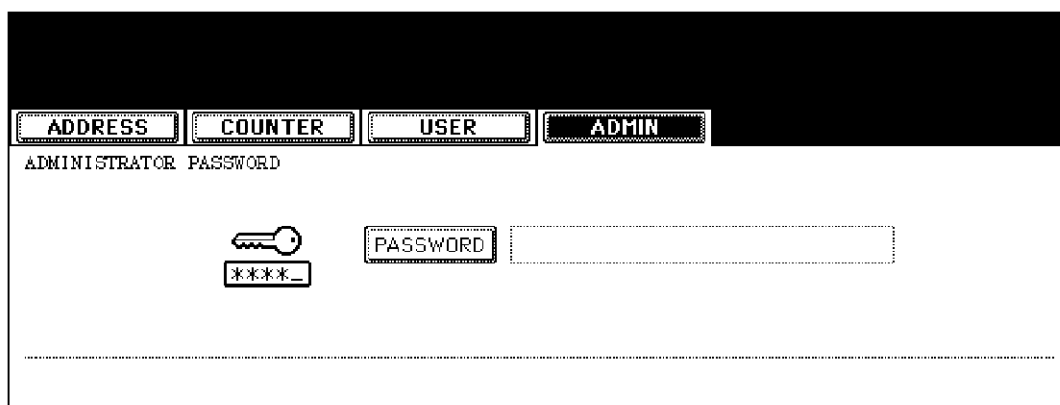


Fig.8-17

- (2) Press the [SERVICE] button.

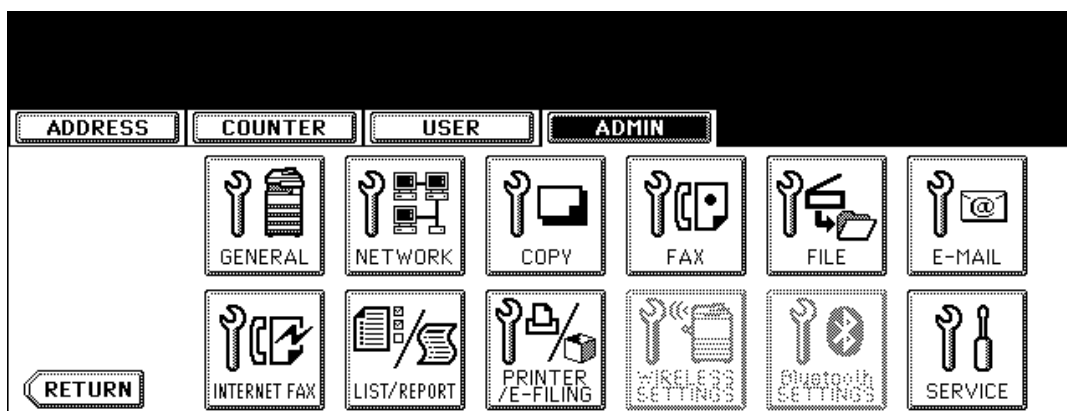


Fig.8-18

- (3) Press the [SERVICE NOTIFICATION] button.

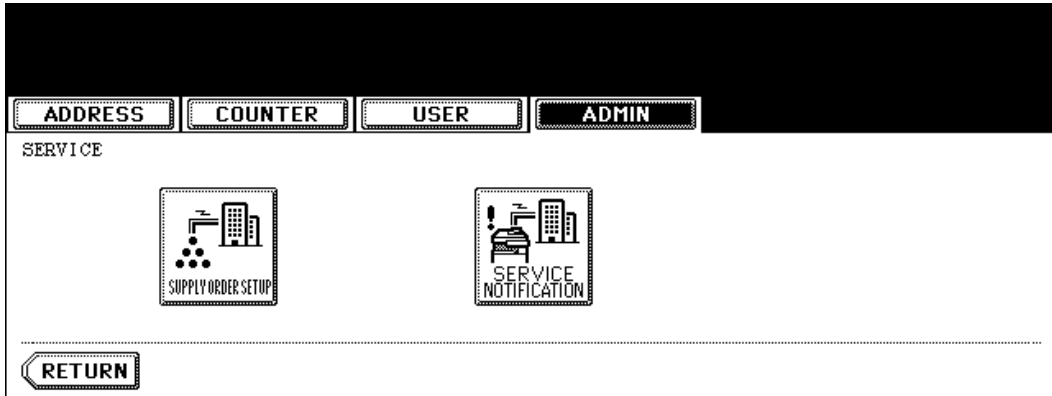


Fig.8-19

- (4) Press the [E-MAIL] or [FAX] button in "SERVICE NOTIFICATION".
- When the [OFF] button is pressed, all functions related Service Notification become ineffective.

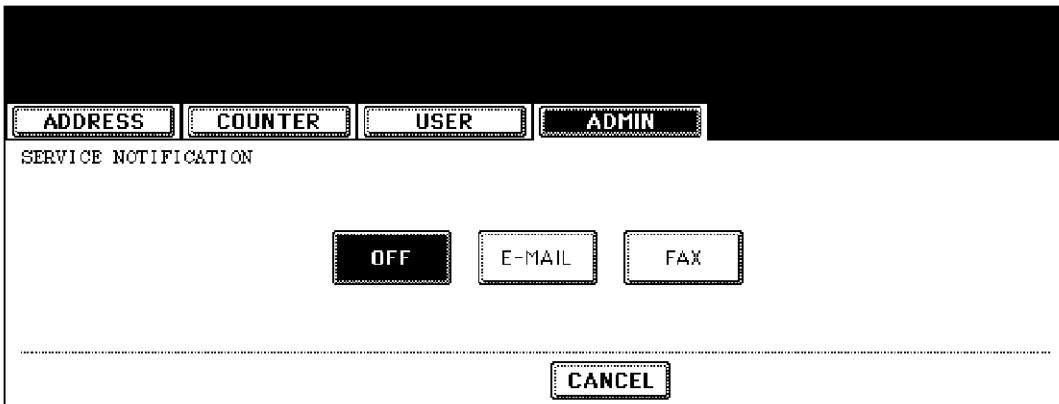


Fig.8-20

- (5) Enter the E-mail address or FAX number of the destination.
- When pressing the [E-MAIL] button, the screen is switched to a full keyboard. Then enter the E-mail addresses and press the [ENTER] button. (Maximum 3 addresses can be set.)

| ADDRESS | COUNTER | USER | ADMIN |
|----------------------|-----------------|------|------------------------|
| SERVICE NOTIFICATION | | | |
| [E-MAIL] | aaa@toshiba.com | | TOTAL COUNTER TRANSMIT |
| [E-MAIL] | | | [ON] [OFF] |
| [E-MAIL] | | | PM COUNTER TRANSMIT |
| | | | [ON] [OFF] |
| | | | SERVICE CALL TRANSMIT |
| | | | [ON] [OFF] |
| | | | [CANCEL] [ENTER] |

Fig.8-21

- Press the [FAX NUMBER] button, key in the FAX number and then press the [ENTER] button.

| ADDRESS | COUNTER | USER | ADMIN |
|----------------------|---------|------|------------------------|
| SERVICE NOTIFICATION | | | |
| [FAX NUMBER] | | | TOTAL COUNTER TRANSMIT |
| | | | [ON] [OFF] |
| | | | PM COUNTER TRANSMIT |
| | | | [ON] [OFF] |
| | | | [CANCEL] [ENTER] |

Fig.8-22

- (6) Press the [ON] button to notify or [OFF] button not to notify of each item for E-mail and FAX. When the Total Count Transmit is set ON, the screen to set the notification date is displayed. Then set the notification date with the following procedure. (The information is notified on the set date and time every month.)

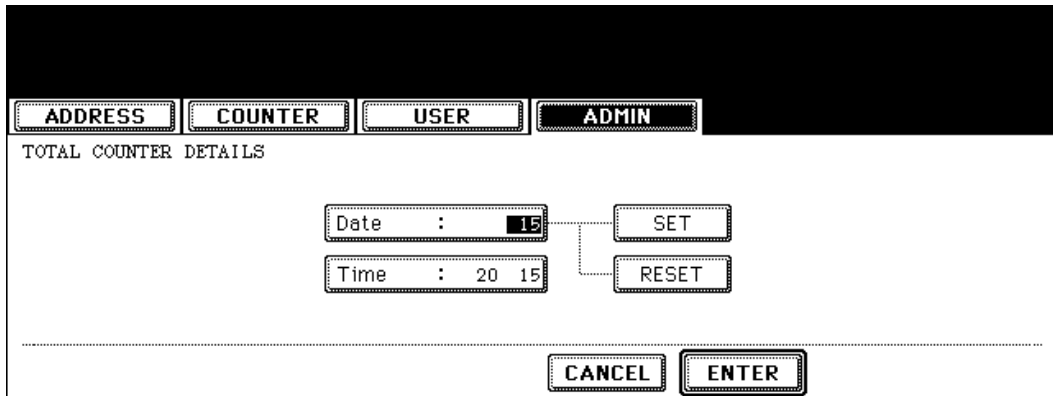


Fig.8-23

- Key in the date (acceptable values: 1-31) in "Date" and press the [SET] button. (Correct the value by pressing the [CLEAR] button if the [SET] button is not yet pressed. Correct the value by pressing the [RESET] button to move the cursor back to the digit to be corrected if the [SET] button is already pressed.)
 - Key in the time (acceptable values: 00:00-23:59) in "Time".
Key in the time in the hour column of "Time", press the [SET] button, key in the time in the minute column of "Time" and press the [SET] button. (Correct the value by pressing the [CLEAR] button if the [SET] button is not yet pressed. Correct the value by pressing the [RESET] button to move the cursor back to the digit to be corrected if the [SET] button is already pressed.)
 - Press the [ENTER] button to set all. The display returns to the screen at procedure 5).
- (7) Press the [ENTER] button. The setting completes.

Note:

Service Notification setting is also available from the following setting mode (08).

| Items | 08 code | Contents |
|---|---------|---------------------------------|
| Service Notification setting | 767 | 0: OFF (Invalid) 1:E-mail 2:FAX |
| E-mail address 1 | 768 | Maximum 192 letters |
| E-mail address 2 | 777 | Maximum 192 letters |
| E-mail address 3 | 778 | Maximum 192 letters |
| FAX number | 1145 | Maximum 32 digits |
| Total Counter Transmit setting | 769 | 0: OFF (Invalid) 1: ON (Valid) |
| Total counter transmission date setting | 770 | 1 to 31 |
| Total counter transmission interval setting (Hour/Minute/Minute) | 776 | 00:00-23:59 |
| Service Call Transmit setting | 775 | 0: OFF (Invalid) 1: ON (Valid) |
| PM Counter Transmit setting | 771 | 0: OFF (Invalid) 1: ON (Valid) |

8.2.3 Items to be notified

The items to be notified are shown below.

- 1) Total Counter Transmit / PM Counter Transmit by E-mail (XML file attached to E-mail has also the same format.)

Subject: Counter Notification

(In case of the PM Counter Transmit, it is shown as "Periodical Maintenance Notification".)

| | | | |
|---------------------------------|--------------------------------|-------------|----------------------|
| ① | Date | : | 06/14/2005 13:47 |
| ② | Machine Model | : | TOSHIBA e-STUDIO451c |
| ③ | SerialNumber | : | 1234567890 |
| ④ | Total Counter | : | 00004787 |
| ChargeCounterFormat: | | | |
| ⑤ | LargeSizeChargeCount | | 1 |
| ⑥ | LargeSizeChargePaperDefinition | | 1 |
| PMCounterFormat: | | | |
| ⑦ | LargeSizePMCount | | 1 |
| ⑧ | LargeSizePMPaperDefinition | | 0 |
| Charge Counter: | | | |
| | | Large | Small |
| <Print Counter> | | | |
| Full Color ----- | | | |
| ⑨ | Copy | 00000000 | 00000000 |
| ⑩ | Print | 00000000 | 00000000 |
| Twin Color ----- | | | |
| ⑪ | Copy | 00000000 | 00000000 |
| Black ----- | | | |
| ⑫ | Copy | 00000000 | 00000000 |
| ⑬ | Print | 00000000 | 00000000 |
| ⑭ | List | 00000000 | 00000000 |
| ⑮ | FAX | 00000000 | 00000000 |
| <Scan Counter> | | | |
| Full Color ----- | | | |
| ⑯ | Copy Scan | 00000000 | 00000000 |
| ⑰ | Net Scan | 00000000 | 00000000 |
| Twin Color ----- | | | |
| ⑱ | Copy Scan | 00000000 | 00000000 |
| Black ----- | | | |
| ⑲ | Copy Scan | 00000000 | 00000000 |
| ⑳ | FAX Scan | 00000000 | 00000000 |
| ㉑ | Net Scan | 00000000 | 00000000 |
| <FAX Counter> | | | |
| ㉒ | Transmit | 00000000 | 00000000 |
| ㉓ | Receive | 00000000 | 00000000 |
| Periodical Maintenance Counter: | | | |
| ㉔ | Set PM | 00150000 | |
| ㉕ | Current PM | 00004787 | |
| ㉖ | Set PMTime | 00000000 | |
| ㉗ | CurrentPMTime | 00000000 | |
| ㉘ | Printer Error History: | | |
| | <u>Date</u> | <u>Time</u> | <u>ErrorCode</u> |
| | 06/13/2005 | 16:44 | F110 |
| | 06/12/2005 | 22:28 | F110 |
| | 06/12/2005 | 22:23 | F110 |
| | 05/15/2005 | 22:23 | F110 |
| | 04/25/2005 | 11:12 | F110 |
| | | | (*1) |

Fig.8-24

- ① Date
- ② Machine model name
- ③ Serial number
- ④ Total counter value
- ⑤ Count setting of large-sized paper (Fee charging system counter)
- ⑥ Definition setting of large-sized paper (Fee charging system counter)
- ⑦ Count setting of large-sized paper (PM)
- ⑧ Definition setting of large-sized paper (PM)
- ⑨ Number of output pages in the Copier Function (FULL COLOR)
- ⑩ Number of output pages in the Printer Function (FULL COLOR)
- ⑪ Number of output pages in the Copier Function (TWIN COLOR)
- ⑫ Number of output pages in the Copier Function (BLACK)
- ⑬ Number of output pages in the Printer Function (BLACK)
- ⑭ Number of output pages at the List Print Mode (BLACK)
- ⑮ Number of output pages in the FAX Function (BLACK)
- ⑯ Number of scanning pages in the Copier Function (FULL COLOR)
- ⑰ Number of scanning pages in the Network Scanning Function (FULL COLOR)
- ⑱ Number of scanning pages in the Copier Function (TWIN COLOR)
- ⑲ Number of scanning pages in the Copier Function (BLACK)
- ⑳ Number of scanning pages in the FAX Function (BLACK)
- ㉑ Number of scanning pages in the Network Scanning Function (BLACK)
- ㉒ Number of transmitted pages in the FAX Function (BLACK)
- ㉓ Number of received pages in the FAX Function (BLACK)
- ㉔ PM count setting value
- ㉕ PM count present value
- ㉖ PM driving count setting value
- ㉗ PM driving count present value
- ㉘ History of error

*1 The latest 20 errors are displayed.

2) Total Counter Transmit / PM Counter Transmit by FAX

*1 In case of the PM Counter Transmit, the title is replaced to "PERIODICAL MAINTENANCE NOTIFICATION".

| COUNTER NOTIFICATION (*1) | | | |
|--------------------------------|------------------------------------|------------------------|----------|
| ① | DATE | : 05/06/14 13:47 | |
| ② | MACHINE MODEL | : TOSHIBA e-STUDIO451c | |
| ③ | SERIAL NUMBER | : 1234567890 | |
| ④ | TOTAL COUNTER | : 00004787 | |
| CHARGE COUNTER FORMAT | | | |
| ⑤ | LARGE SIZE CHARGE COUNT | : 1 | |
| ⑥ | LARGE SIZE CHARGE PAPER DEFINITION | : 1 | |
| CHARGE COUNTER | | | |
| PRINT COUNTER | | | |
| FULL COLOR | | | |
| ⑨ | COPY | 00000000 | 00000000 |
| ⑩ | PRINT | 00000000 | 00000000 |
| TWIN COLOR | | | |
| LARGE | | | |
| ⑪ | COPY | 00000000 | 00000000 |
| SMALL | | | |
| ⑫ | COPY | 00000000 | 00000000 |
| ⑬ | PRINT | 00000000 | 00000000 |
| ⑭ | LIST | 00000000 | 00000000 |
| ⑮ | FAX | 00000000 | 00000000 |
| FAX COUNTER | | | |
| LARGE | | | |
| ⑳ | TRANSMIT | 00000000 | 00000000 |
| ㉑ | RECEIVE | 00000000 | 00000000 |
| SMALL | | | |
| PERIODICAL MAINTENANCE COUNTER | | | |
| ㉒ | SET PM | : 00000000 | |
| ㉓ | CURRENT PM | : 00000000 | |
| ㉔ | SET PM TIME | : 00000000 | |
| ㉕ | CURRENT PM TIME | : 00000000 | |
| ㉖ | PRINTER ERROR HISTORY | | |
| DATE TIME ERROR CODE | | | |
| 05/06/13 16:44 F110 | | | |
| 05/06/12 22:28 F110 | | | |
| 05/06/12 22:23 F110 | | | |
| 05/05/15 22:23 F110 | | | |
| 05/04/25 11:12 F110 | | | |
| DATE TIME ERROR CODE | | | |
| } (*2) | | | |

Fig.8-25

- ① Date
- ② Machine model name
- ③ Serial number
- ④ Total counter value
- ⑤ Count setting of large-sized paper (Fee charging system counter)
- ⑥ Definition setting of large-sized paper (Fee charging system counter)
- ⑦ Count setting of large-sized paper (PM)

- ⑧ Definition setting of large-sized paper (PM)
- ⑨ Number of output pages in the Copier Function (FULL COLOR)
- ⑩ Number of output pages in the Printer Function (FULL COLOR)
- ⑪ Number of output pages in the Copier Function (TWIN COLOR)
- ⑫ Number of output pages in the Copier Function (BLACK)
- ⑬ Number of output pages in the Printer Function (BLACK)
- ⑭ Number of output pages at the List Print Mode (BLACK)
- ⑮ Number of output pages in the FAX Function (BLACK)
- ⑯ Number of scanning pages in the Copier Function (FULL COLOR)
- ⑰ Number of scanning pages in the Network Scanning Function (FULL COLOR)
- ⑱ Number of scanning pages in the Copier Function (TWIN COLOR)
- ⑲ Number of scanning pages in the Copier Function (BLACK)
- ⑳ Number of scanning pages in the FAX Function (BLACK)
- ㉑ Number of scanning pages in the Network Scanning Function (BLACK)
- ㉒ Number of transmitted pages in the FAX Function (BLACK)
- ㉓ Number of received pages in the FAX Function (BLACK)
- ㉔ PM count setting value
- ㉕ PM count present value
- ㉖ PM driving count setting value
- ㉗ PM driving count present value
- ㉘ History of error

*2 The latest 20 errors are displayed.

9. DATA CLONING with USB STORAGE DEVICE

In this equipment, the user data, setting items and SRAM data can be backed up / restored by turning the power ON after connecting the USB storage device on which the data cloning programs have been written to the USB connector mounted on the SYS board.

The type of data to be backed up/restored can be selected on the LCD screen in this method.

This allows you to back up/restore only the necessary data individually or to back up/restore all data in a batch.

Programs needed for data cloning with this method are given in the following table.

| Storage location | Program file name |
|------------------|------------------------|
| Root directory | rootusb, clone_28_451c |

Important:

- It is assumed that data cloning is to be performed when equipment is installed or options are installed. If the address book has been registered, do not perform data cloning. Registered / set data are lost.
- The USB storage device for the data cloning must meet the following conditions. A data cloning operation with any devices other than the following will not be guaranteed.
 - A combination USB storage device with a flash memory (to be connected directly to the USB port) and its capacity is between 128 MB and 512 MB (or 1 GB).
 - A device compliant with the following specifications established by USB-IF (USB Implementers Forum)

| | | |
|-------------------|-----------|-----------------------------|
| Class number: | 8 (=08h) | (Mass storage class) |
| Sub-Class number: | 6 (=06h) | (SCSI transfer command set) |
| Protocol number: | 80 (=50h) | (Bulk-only) |
- * Most of the common USB storage devices are compliant with the above specifications and are therefore applicable to this data cloning. However, most of these devices were originally developed to be used in an environment for PCs (e.g. Windows or Macintosh) and thus operations exclusively with this equipment have not been fully guaranteed. Therefore, the user must thoroughly check in advance whether there will be any problem in operating with this equipment when adopting one of these devices.
- The USB storage devices compliant with both USB 1.1 and USB 2.0 can be used for this data cloning. However, the operating speed when using a device compliant with USB 2.0 is equivalent to the one with a device compliant with USB 1.1.
- Data cloning with any storage devices other than a flash memory (e.g. USB-connectable memory card reader, CD/DVD drive, hard disk) will never be guaranteed. Therefore never use them for this operation.
- Be sure to unplug the LAN cable and Fax line before data are backed up / restored. Also, do not use the RADF and open the cover, drawer, etc. during the data cloning.
- Data can be backed up / restored only for the same model and version. If the version is different, update the firmware and back up / restore data in the same version.
- Restore data to equipment which has the same options as when the data are backed up.
- If "Department management" or "User management information" is restored, the counter values are copied as well, so clear all of them. However, the total counter is not copied.
- Delete the backed up data in the USB storage device after the data cloning.

[A] Data cloning procedure (Backup)

Important:

- The file system for the USB storage device should be in the FAT format. Note that any device formatted in FAT32 or NTFS will not be operated. Its file system can be confirmed by opening the properties of the device from Windows Explorer.
 - Never turn the power of the equipment OFF during data cloning, or the data could be damaged and the operation not carried out properly.
- (1) Connect the USB storage device to the PC and delete all data in the USB storage device.
 - The file system for the USB storage device should be in the FAT format.
 - Windows95 and NT do not support USB. The data cannot be written into the device with the PC in which these OS are installed.
 - (2) Write the program file.
 - Write the data cloning program into the root directory.
 - (3) Shut down the equipment.
 - (4) Connect the USB storage device to the USB connector (host) on the SYS board.

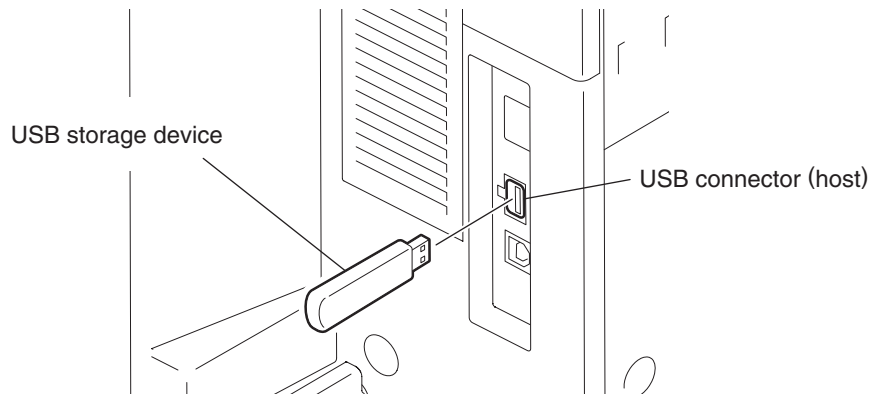


Fig. 9-1

<User Data Backup>

- (5) Turn the power ON while pressing the [5] and [9] button simultaneously. The screen to select the backup/restore items is displayed.

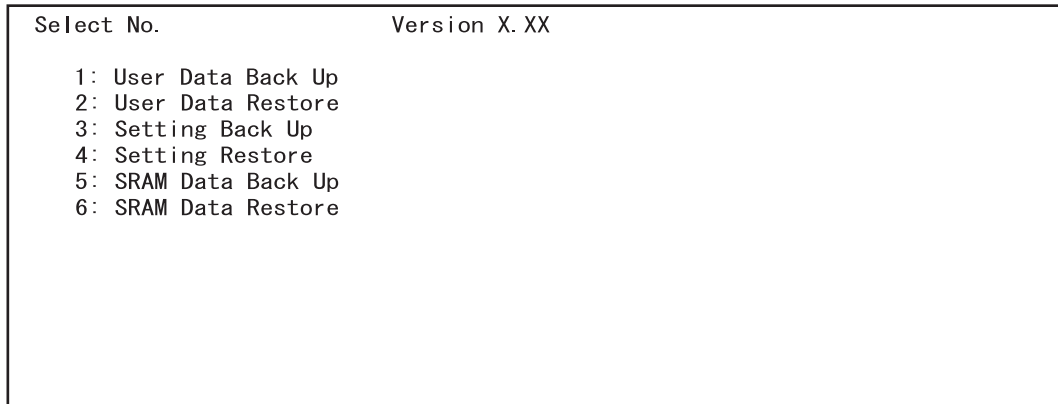


Fig. 9-2

- (6) Select the items to be performed with the digital keys.
- In case of backup, select one of the following items.
 - <Backing up User data>
Select "1: User Data Back Up".
 - <Backing up Setting item>
Select "3: Setting Back Up".
 - <Backing up SRAM data>
Select "5: SRAM Data Back Up".

Note:

After the item is selected with the digital keys, displaying the next menu may take a long time.

- (7) Press the [1] button. The screen to select the user data backup item is displayed. In this screen, the items to be backed up are shown after the mark "*". (The items "4", "5" and "6" are selected in the screen by default.)



Fig. 9-3

- (8) Select the items to be backed up with the digital keys.
The mark "*" is shown on the selected item. The mark "*" can be deleted or added each time the corresponding digital key is pressed.
- To back up the data in a batch, select "4", "5" or "6". (Selecting "4" performs "1", "2" and "3" together.)
 - To back up the data individually, select the following items.
 - <Backing up Address book>
Select "1: Address Book" only.
 - <Backing up Mail box>
Select "2: Mail Box" only.
 - <Backing up Template>
Select "3: Template" only.
 - <Backing up 1: Address Book, 2: Mail Box and 3: Template in a batch>
Select "4: Combined" only.
 - <Backing up Department management>
Select "5: Department Code" only.
 - <Backing up User management information>
Select "6: User Info" only.

E.g.:

In case of backing up the department management and user management information

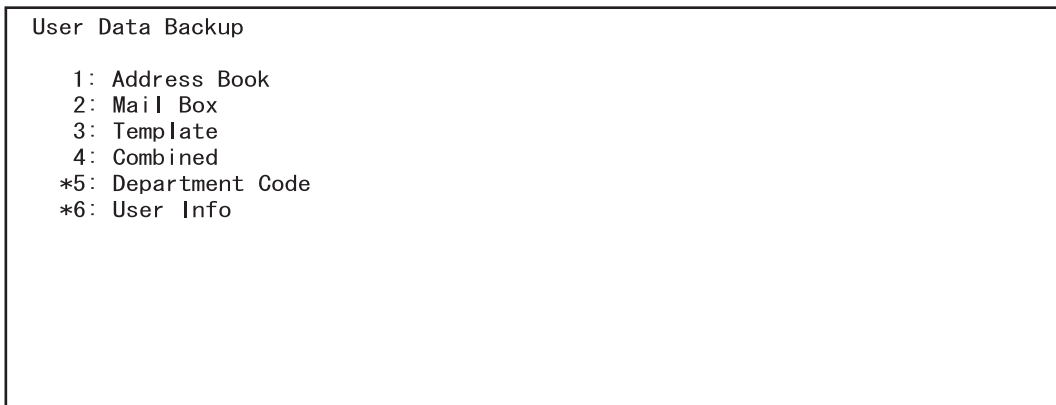


Fig. 9-4

(The following screens are given as an example of when all items are backed up.)

- (9) Press the [Start] button.
The backup starts and the backing up status is displayed on the LCD screen.

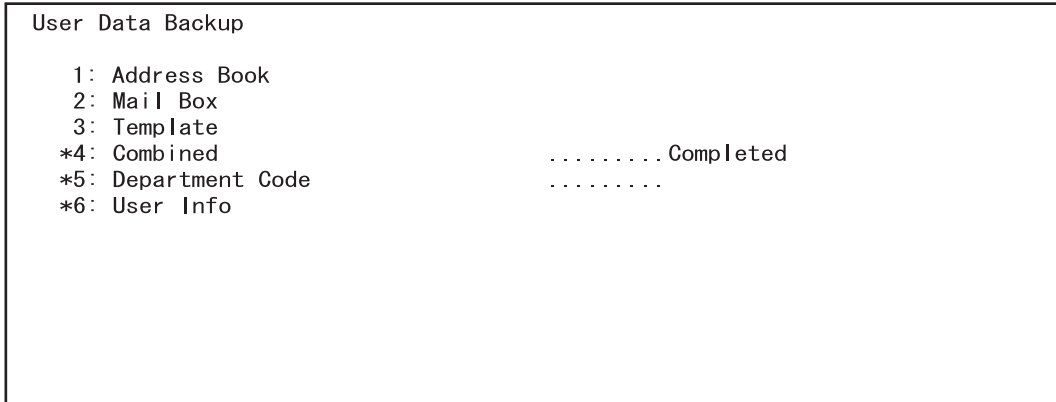


Fig. 9-5

- (10) "Back Up Completed" is displayed on the LCD screen when the backup has been properly completed.

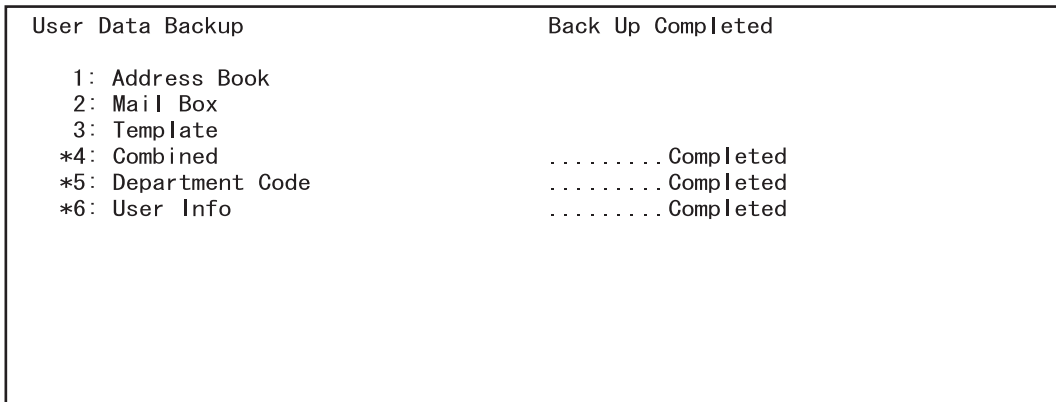


Fig. 9-6

- (11) Turn the power OFF and remove the USB storage device.

<Setting Backup>

- (12) Connect the USB storage device to the USB connector (host) on the SYS board.
- (13) Turn the power ON while pressing the [5] and [9] button simultaneously.
The screen to select the backup/restore items is displayed.

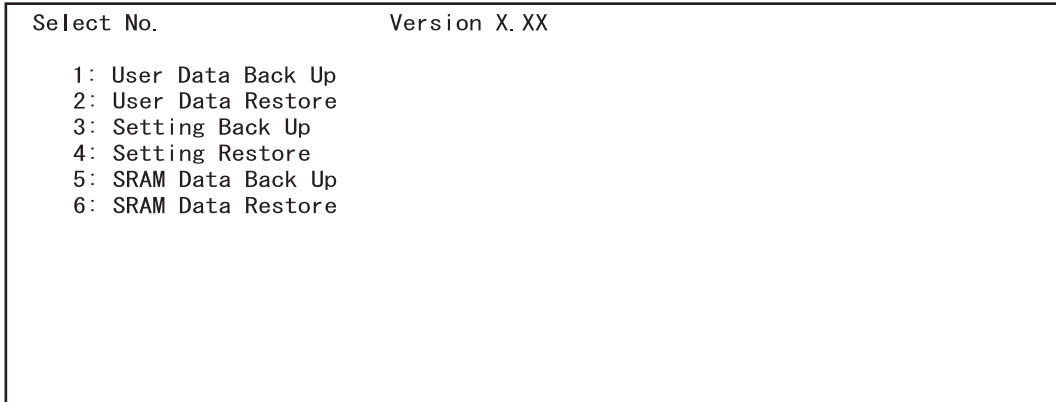


Fig. 9-7

Note:

After the item is selected with the digital keys, displaying the next menu may take a long time.

- (14) Press the [3] button.
The screen to select the setting backup item is displayed. In this screen, the items to be backed up are shown after the mark "*". (No items are selected in the screen by default.)

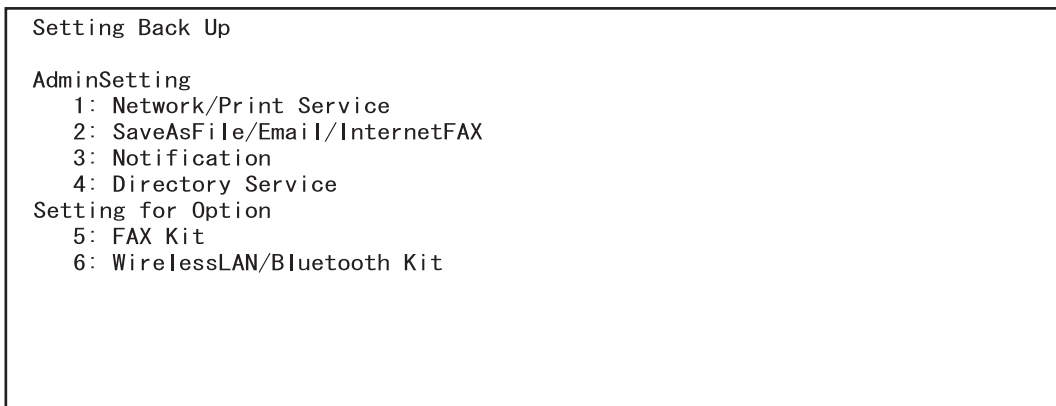


Fig. 9-8

- (15) Select the items to be backed up with the digital keys.
 The mark "*" is shown on the selected item. The mark "**" can be deleted or added each time the corresponding digital key is pressed.
- To back up the data individually, select the following items.
 - <Backing up TopAccess: Network/Print Service>
 Select "1: Network/Print Service" only.
 - <Backing up TopAccess: SaveAsFile/Email/InternetFAX>
 Select "2: SaveAsFile/Email/InternetFAX" only.
 - <Backing up TopAccess: Notification >
 Select "3: Notification" only.
 - <Backing up TopAccess: Directory Service>
 Select "4: Directory Service" only.
 - <Backing up Option: Fax setting>
 Select "5: FAX Kit" only.
 - <Backing up Option: WirelessLAN/Bluetooth setting>
 Select "6: WirelessLAN/Bluetooth Kit" only.

(The following screens are given as an example of when all TopAccess items are backed up.)

- (16) Press the [Start] button.
 The backup starts and the backing up status is displayed on the LCD screen.

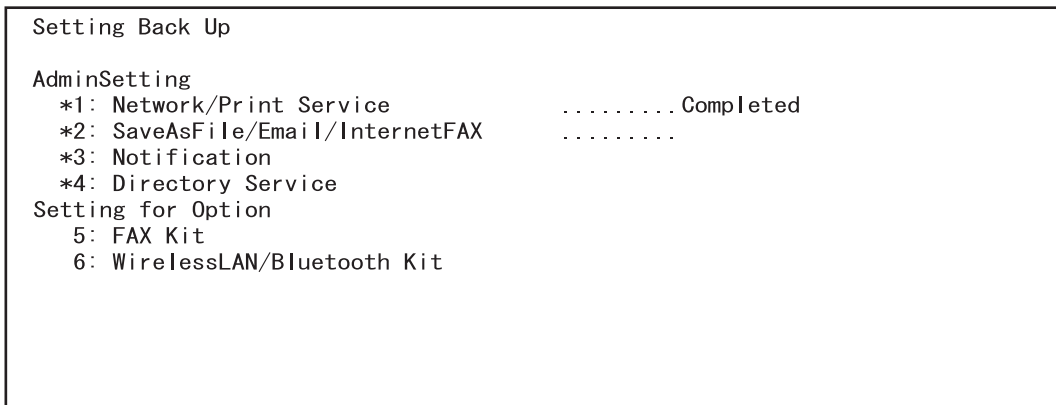


Fig. 9-9

- (17) "Back Up Completed" is displayed on the LCD screen when the backup has been properly completed.

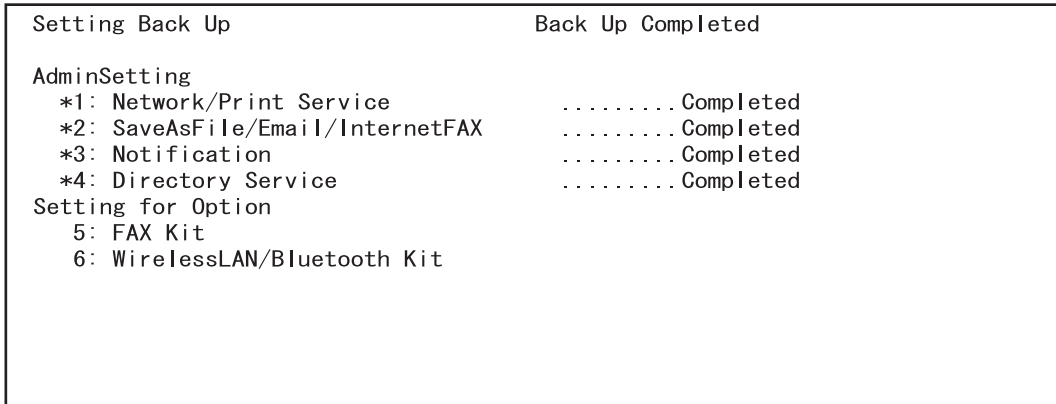


Fig. 9-10

- (18) Turn the power OFF and remove the USB storage device.

<SRAM Data Backup>

- (19) Connect the USB storage device to the USB connector (host) on the SYS board.
- (20) Turn the power ON while pressing the [5] and [9] button simultaneously. The screen to select the backup/restore items is displayed.

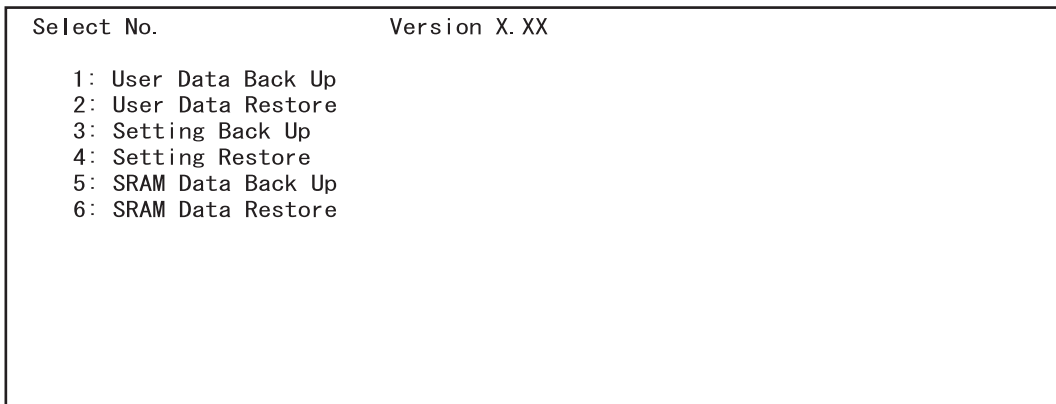


Fig. 9-11

Note:

After the item is selected with the digital keys, displaying the next menu may take a long time.

(21) Press the [5] button.

The screen to select the SRAM data backup item is displayed. In this screen, the item to be backed up is shown after the mark "*". (The item is not selected in the screen by default.)



Fig. 9-12

(22) Select the item to be backed up with the digital keys.

The mark "*" is shown on the selected item. The mark "*" can be deleted or added each time the corresponding digital key is pressed.

- To back up the data individually, select the following item.
<Backing up SRAM Data>
Select "1. SRAM".

Note:

The backup/restore of the SRAM data can be performed only for the same model.
The ROM version must be the same when the data are backed up and restored.

(The following screens are given as an example of when SRAM data are backed up.)

(23) Press the [Start] button.

The backup starts and the backing up status is displayed on the LCD screen.

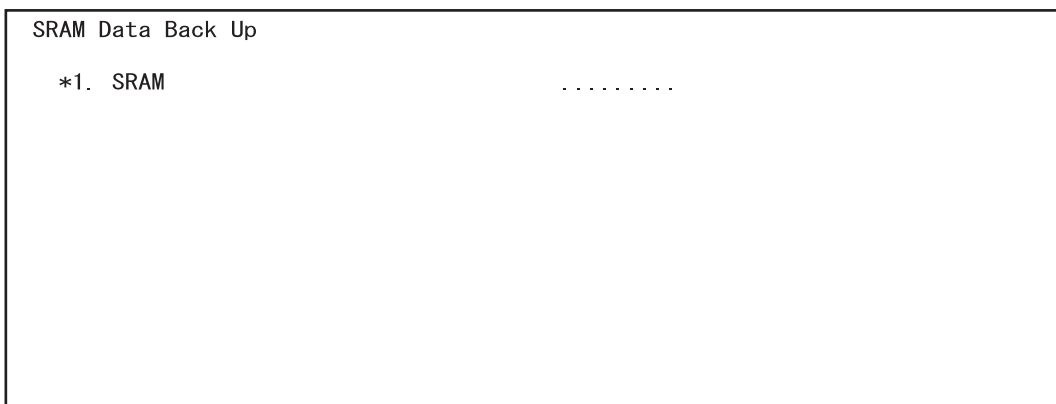


Fig. 9-13

(24) "Back Up Completed" is displayed on the LCD screen when the backup has been properly completed.

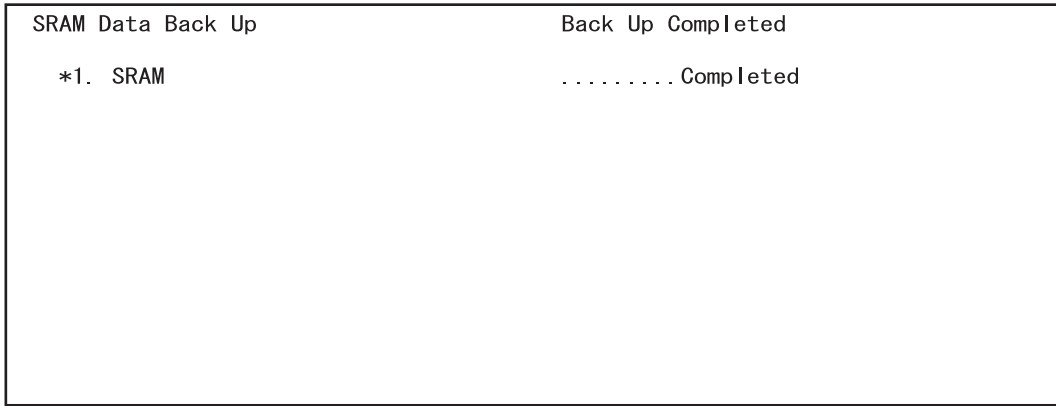


Fig. 9-14

(25) Turn the power OFF and remove the USB storage device.

[B] Data cloning procedure (Restore)

Important:

- The file system for the USB storage device should be in the FAT format. Note that any device formatted in FAT32 or NTFS will not be operated. Its file system can be confirmed by opening the properties of the device from Windows Explorer.
- Never turn the power of the equipment OFF during data cloning, or the data could be damaged and the operation not carried out properly.

- (1) Shut down the equipment.
- (2) Connect the USB storage device to the USB connector (host) on the SYS board.

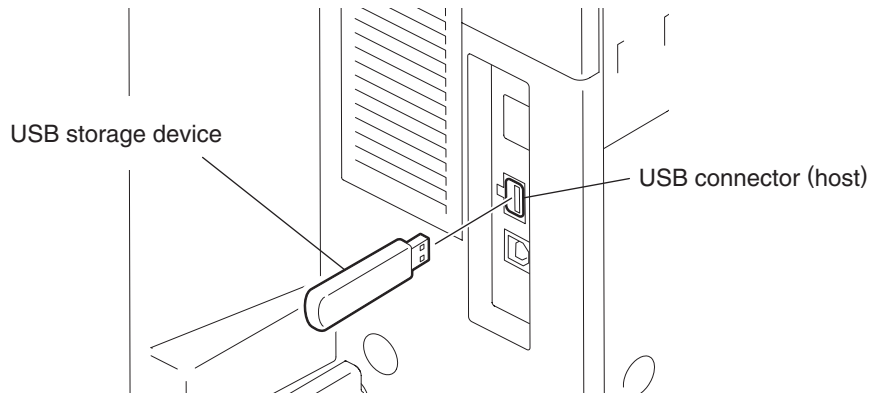


Fig. 9-15

<User Data Restore>

- (3) Turn the power ON while pressing the [5] and [9] button simultaneously.
The screen to select the backup/restore items is displayed.

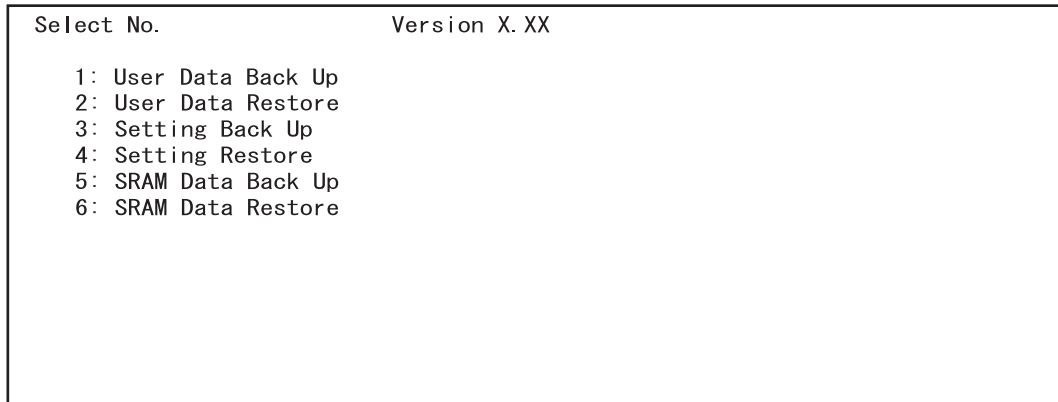


Fig. 9-16

- (4) Select the items to be performed with the digital keys.
- In case of restore, select the following items.
 - <Restoring User data>
Select "2: User Data Restore".
 - <Restoring Setting item>
Select "4: Setting Restore".
 - <Restoring SRAM data>
Select "6: SRAM Data Restore".

Note:

After the item is selected with the digital keys, displaying the next menu may take a long time.

- (5) Press the [2] button.
The screen to select the user data restore item is displayed. In this screen, the items to be restored are shown after the mark "*". (The items "4", "5" and "6" are selected in the screen by default.)



Fig. 9-17

- (6) Select the items to be restored with the digital keys.
The mark "*" is shown on the selected item. The mark "*" can be deleted or added each time the corresponding digital key is pressed.
- To restore the data in a batch, select "4", "5" or "6". (Selecting "4" performs "1", "2" and "3" together.)
 - To restore the data individually, select the following items.
Be sure to select the same item as the one backed up individually.
- <Restoring Address book>
Select "1: Address Book" only.
- <Restoring Mail box>
Select "2: Mail Box" only.
- <Restoring Template>
Select "3: Template" only.
- <Restoring 1: Address Book, 2: Mail Box and 3: Template in a batch>
Select "4: Combined" only.
- <Restoring Department management>
Select "5: Department Code" only.
- <Restoring User management information>
Select "6: User Info" only.

E.g.:

In case of restoring the department management and user management information



Fig. 9-18

(The following screens are given as an example of when all items are restored.)

- (7) Press the [Start] button.
The restore starts and the restoring status is displayed on the LCD screen.

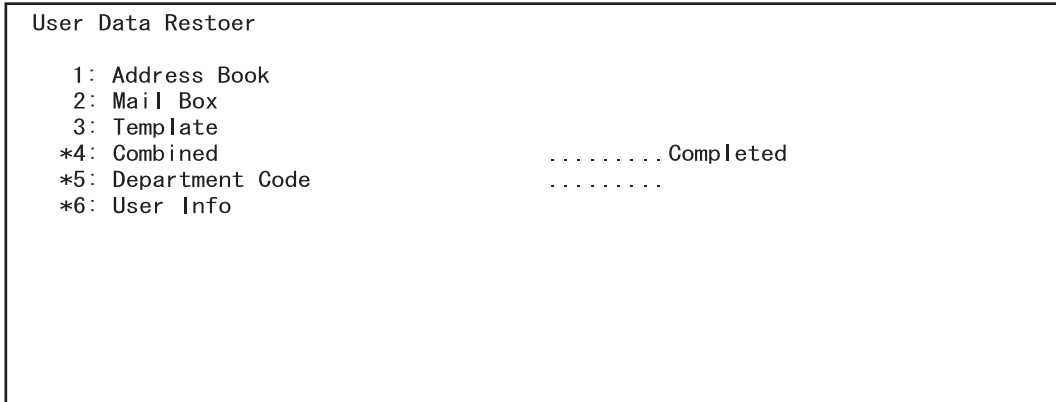


Fig. 9-19

- (8) "Restore Completed" is displayed on the LCD screen when the restore has been properly completed.

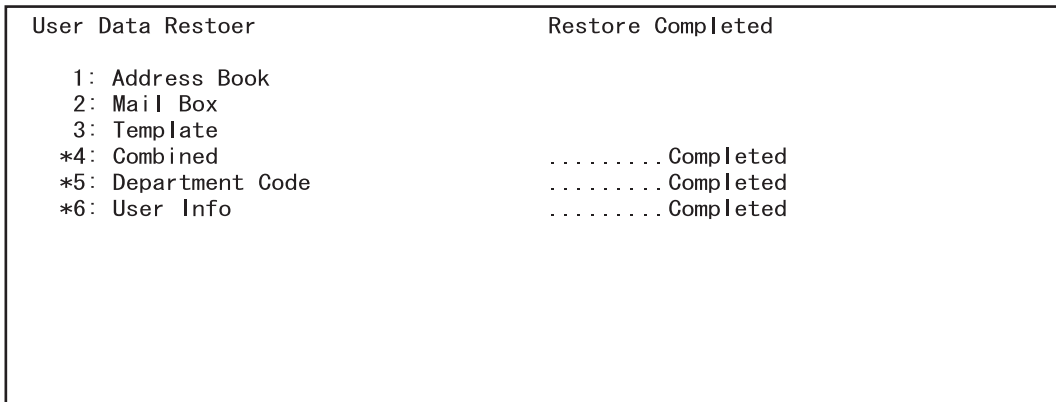


Fig. 9-20

- (9) Turn the power OFF and remove the USB storage device.
- (10) Clear the counter (in case of restoring "Department Code" and "User Info").
Since the counter values are also copied, clear all of them. However, the total counter is not copied.
<Procedure>
Press the buttons as follows: [USER FUNCTION] → [ADMIN] → Enter the password → [COUNTER] → [DEPARTMENT SETTING] → Enter the password → [RESET ALL COUNTERS]
* Enable the department management when the [RESET ALL COUNTERS] button is set to be disabled.

<Setting Restore>

- (11) Connect the USB storage device to the USB connector (host) on the SYS board.
- (12) Turn the power ON while pressing the [5] and [9] button simultaneously.
The screen to select the backup/restore items is displayed.

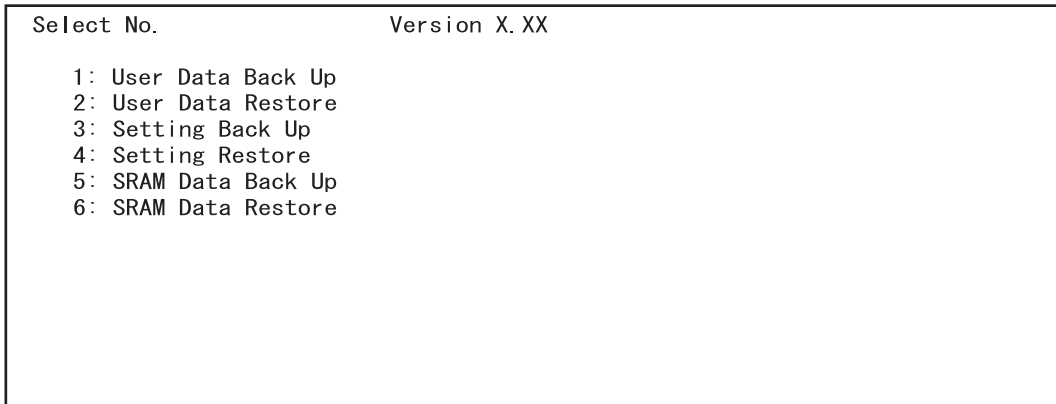


Fig. 9-21

Note:

After the item is selected with the digital keys, displaying the next menu may take a long time.

- (13) Press the [4] button.
The screen to select the setting restore item is displayed. In this screen, the items to be restored are shown after the mark "***". (No items are selected in the screen by default.)

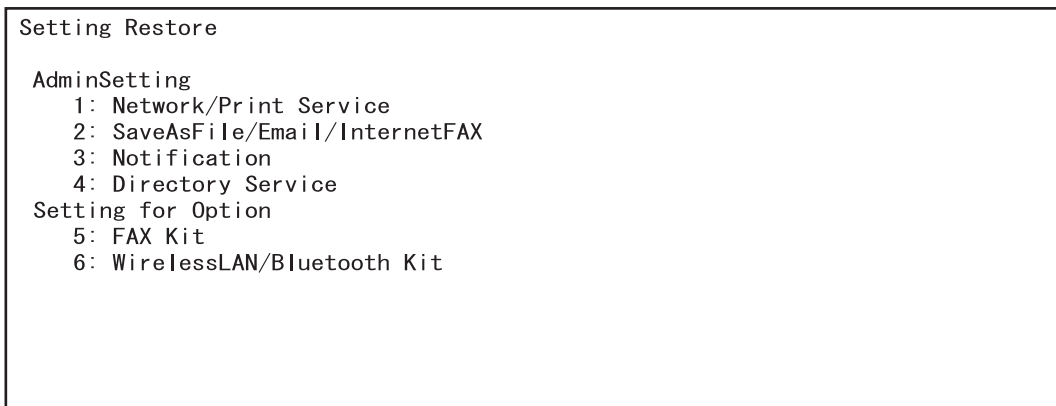


Fig. 9-22

- (14) Select the items to be restored with the digital keys.
 The mark "*" is shown on the selected item. The mark "**" can be deleted or added each time the corresponding digital key is pressed.
- To restore the data individually, select the following items.
 - <Restoring TopAccess: Network/Print Service>
 Select "1: Network/Print Service" only.
 - <Restoring TopAccess: SaveAsFile/Email/InternetFAX>
 Select "2: SaveAsFile/Email/InternetFAX" only.
 - <Restoring TopAccess: Notification >
 Select "3: Notification" only.
 - <Restoring TopAccess: Directory Service>
 Select "4: Directory Service" only.
 - <Restoring Option: Fax setting>
 Select "5: FAX Kit" only.
 - <Restoring Option: WirelessLAN/Bluetooth setting>
 Select "6: WirelessLAN/Bluetooth Kit" only.

Note:

Be sure to restore the same option items in the same condition as when the option items were backed up.

(The following screens are given as an example of when all TopAccess items are restored.)

- (15) Press the [Start] button.
 The restore starts and the restoring status is displayed on the LCD screen.

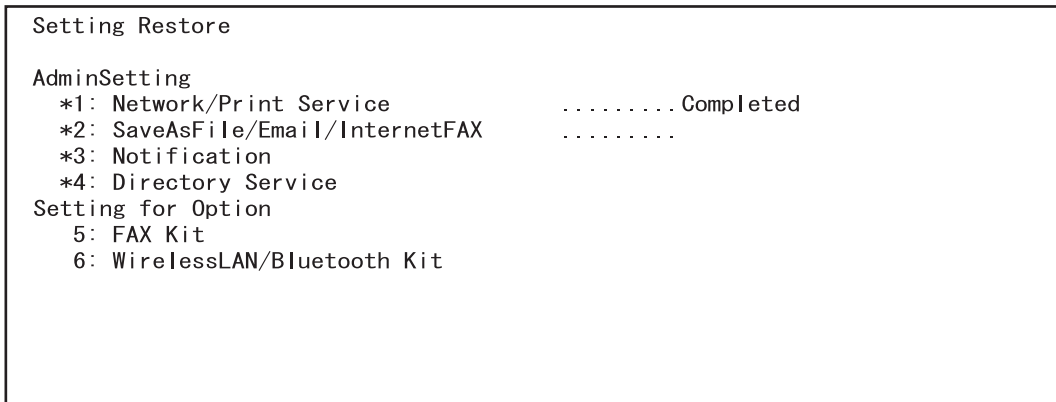


Fig. 9-23

- (16) "Restore Completed" is displayed on the LCD screen when the restore has been properly completed.

| Setting Restore | Restore Completed |
|----------------------------------|-------------------|
| AdminSetting | |
| *1: Network/Print Service | Completed |
| *2: SaveAsFile/Email/InternetFAX | Completed |
| *3: Notification | Completed |
| *4: Directory Service | Completed |
| Setting for Option | |
| 5: FAX Kit | |
| 6: WirelessLAN/Bluetooth Kit | |

Fig. 9-24

- (17) Turn the power OFF and remove the USB storage device.

<SRAM Data Restore>

- (18) Connect the USB storage device to the USB connector (host) on the SYS board.
- (19) Turn the power ON while pressing the [5] and [9] button simultaneously.
The screen to select the backup/restore items is displayed.

| Select No. | Version X. XX |
|----------------------|---------------|
| 1: User Data Back Up | |
| 2: User Data Restore | |
| 3: Setting Back Up | |
| 4: Setting Restore | |
| 5: SRAM Data Back Up | |
| 6: SRAM Data Restore | |

Fig. 9-25

Note:

After the item is selected with the digital keys, displaying the next menu may take a long time.

(20) Press the [6] button.

The screen to select the SRAM data restore item is displayed. In this screen, the item to be restored is shown after the mark "**". (The item is not selected in the screen by default.)



Fig. 9-26

(21) Select the item to be restored with the digital keys.

The mark "*" is shown on the selected item. The mark "*" can be deleted or added each time the corresponding digital key is pressed.

- To restore the data individually, select the following item.
<Restoring SRAM Data>
Select "1. SRAM".

Note:

The backup/restore of the SRAM data can be performed only for the same model.
The ROM version must be the same when the data are backed up and restored.

(The following screens are given as an example of when SRAM data are restored.)

(22) Press the [Start] button.

The restore starts and the restoring status is displayed on the LCD screen.

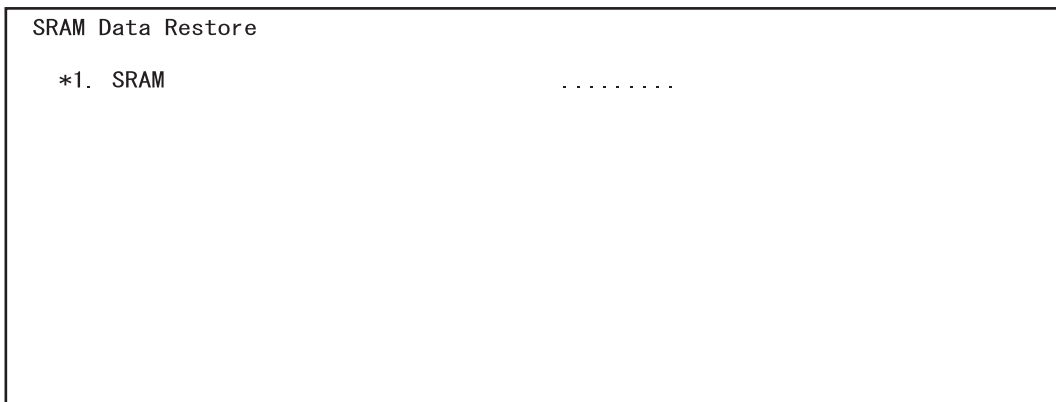


Fig. 9-27

(23) "Restore Completed" is displayed on the LCD screen when the restore has been properly completed.

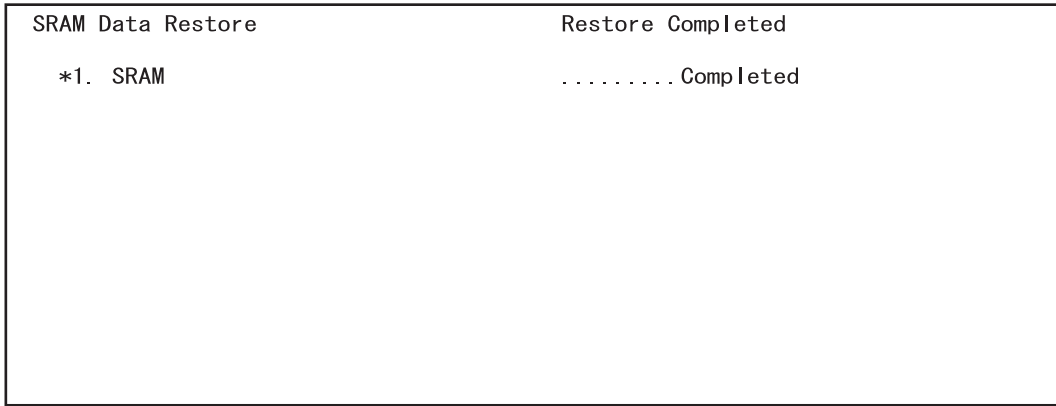


Fig. 9-28

(24) Turn the power OFF and remove the USB storage device.

[C] Confirmation of the error

"Back Up ERROR X" (X: Error number) is displayed at the top of the LCD screen when the data have not been properly backed up / restored. In this case, turn the power OFF and then check the following items. After confirming and solving the problem, back up / restore the data again from the beginning.

- Does the USB storage device meet the conditions being used for this cloning?
- Is the updated program file written on the USB storage device properly?
- Is the USB storage device installed properly?
- Is the USB storage device or the equipment damaged?

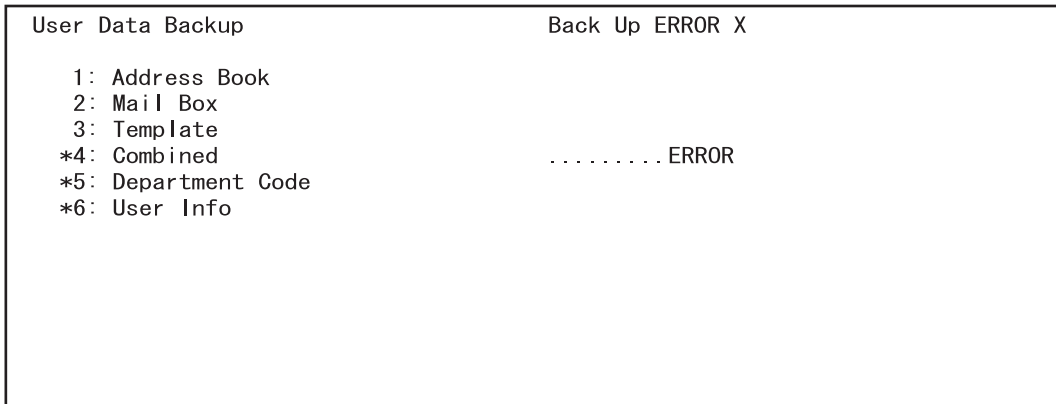


Fig. 9-29

| Error number | Error content |
|---------------------|---------------------------|
| ERROR 1 | Copy error |
| ERROR 2 | I/F error |
| ERROR 3 | USB memory full error |
| ERROR 4 | Working folder error |
| ERROR 5 | File not found error |
| ERROR 6 | Security error |
| ERROR 7 | Checksum error |
| ERROR 8 | Model check error |
| ERROR 9 | Version check error |
| ERROR 10 | Destination check error |
| ERROR 11 | Serial number check error |

[D] Backup file

Backed up data files are encrypted.

<User data file>

The folder "user_data" is created in the root directory and the following files are stored in it.

| Data item | File name |
|---|-----------------------|
| Address book | BACKUP_ADDR.sct |
| Mailbox | BACKUP_MBOX.sct |
| Template | BACKUP_TEMP.sct |
| Back up the Address book, Mailbox and Template in a batch | BACKUP_ALL.sct |
| Department management information | BACKUP_Department.sct |
| User management information | BACKUP_User.sct |

<Setting data file>

The folder "setting_data" is created in the root directory and the following files are stored in it.

| Data item | File name |
|--|----------------|
| Network / Print service | network.sct |
| SaveAsFile / Email / InternetFAX | scan.sct |
| Notification setting | notice.sct |
| Directory Service | ldap.sct |
| FAX setting | fax.sct |
| Wireless LAN setting / Bluetooth setting | wl.sct, bl.sct |

<SRAM data file>

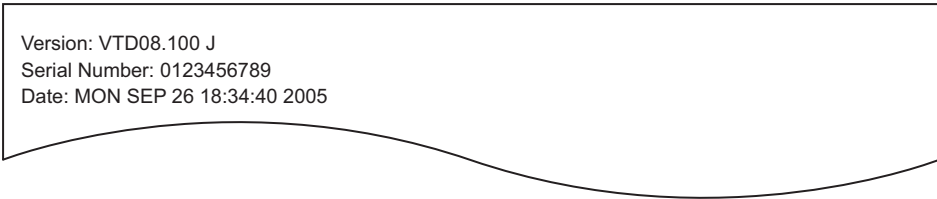
The folder "sram_data" is created in the root directory and the following file is stored in it.

| Data item | File name |
|-----------|-----------|
| SRAM | sram.sct |

* In addition to the backed up data, the following files are created in each folder.

| Back up item | File name |
|-------------------|------------------|
| User data | user_data.txt |
| Setting item data | setting_data.txt |
| SRAM data | sram_data.txt |

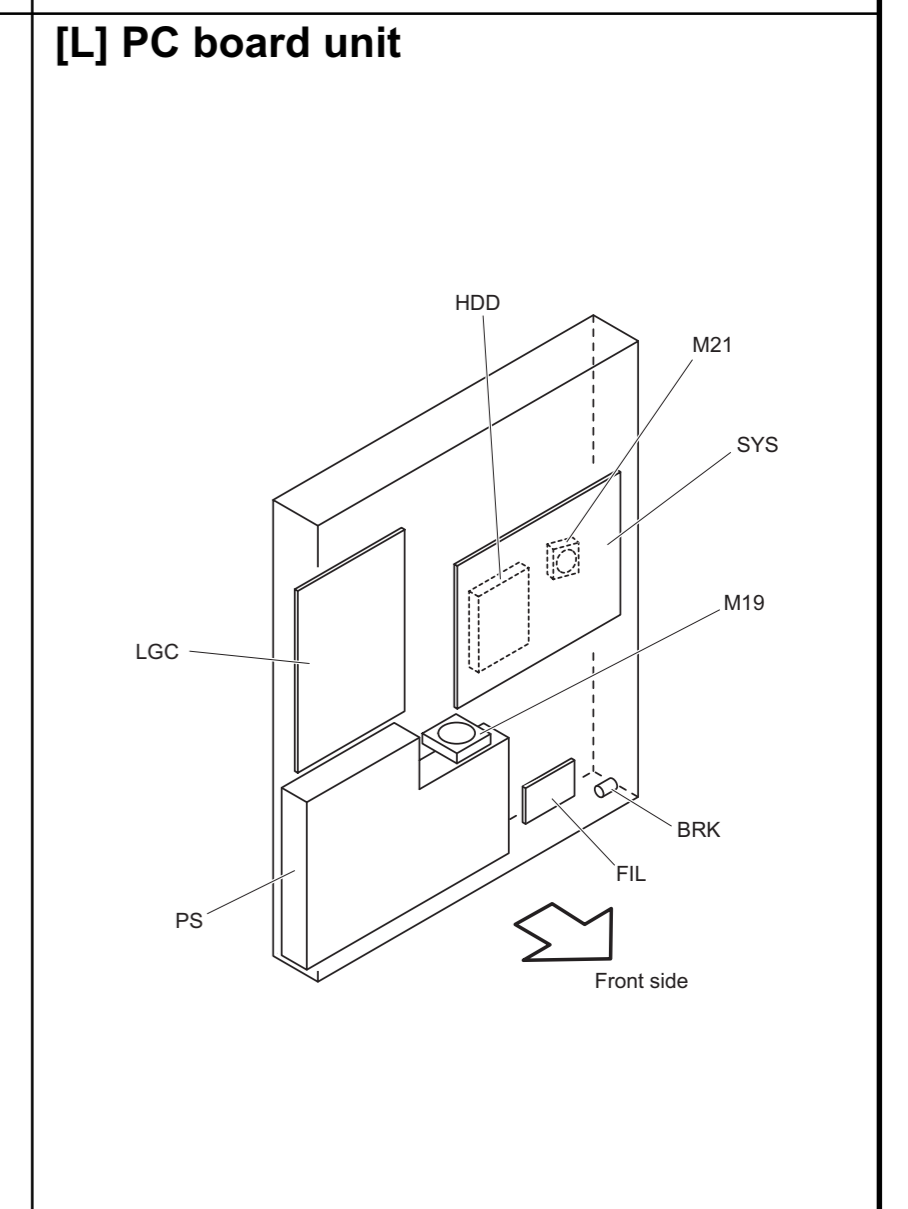
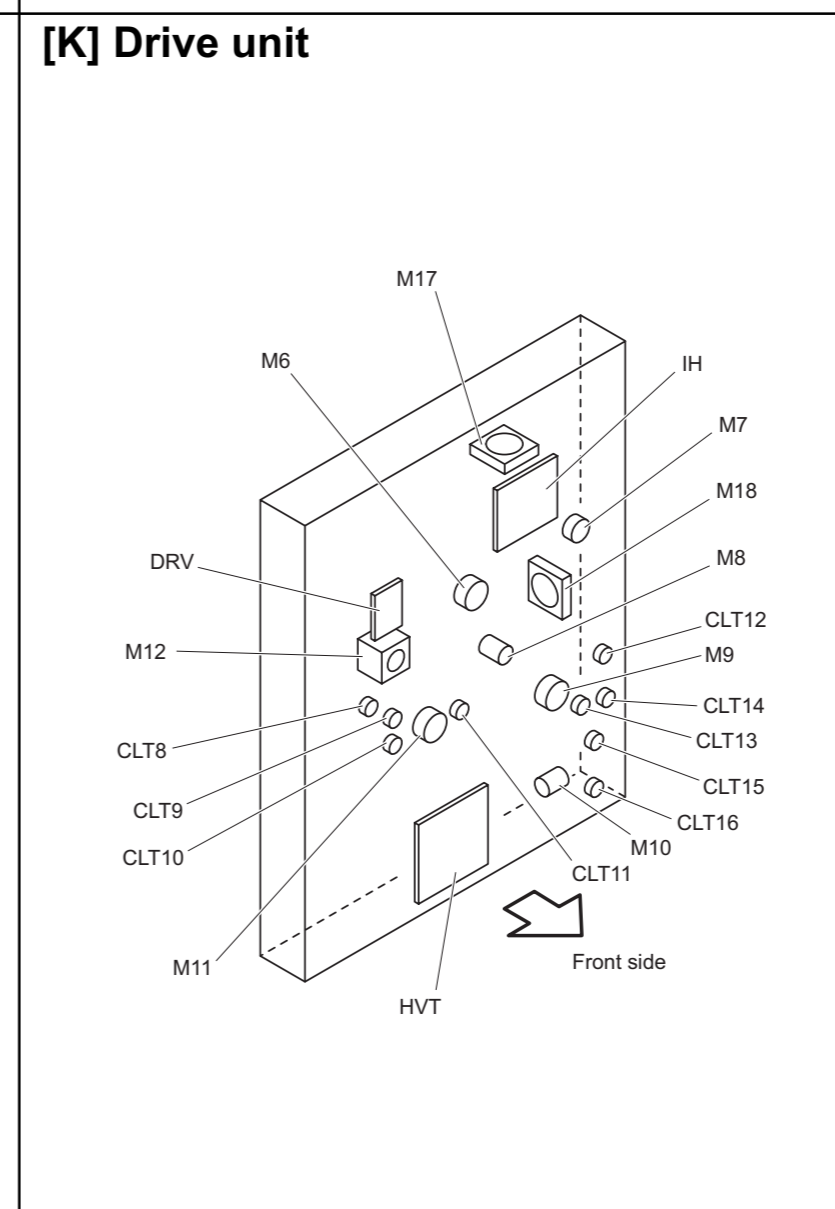
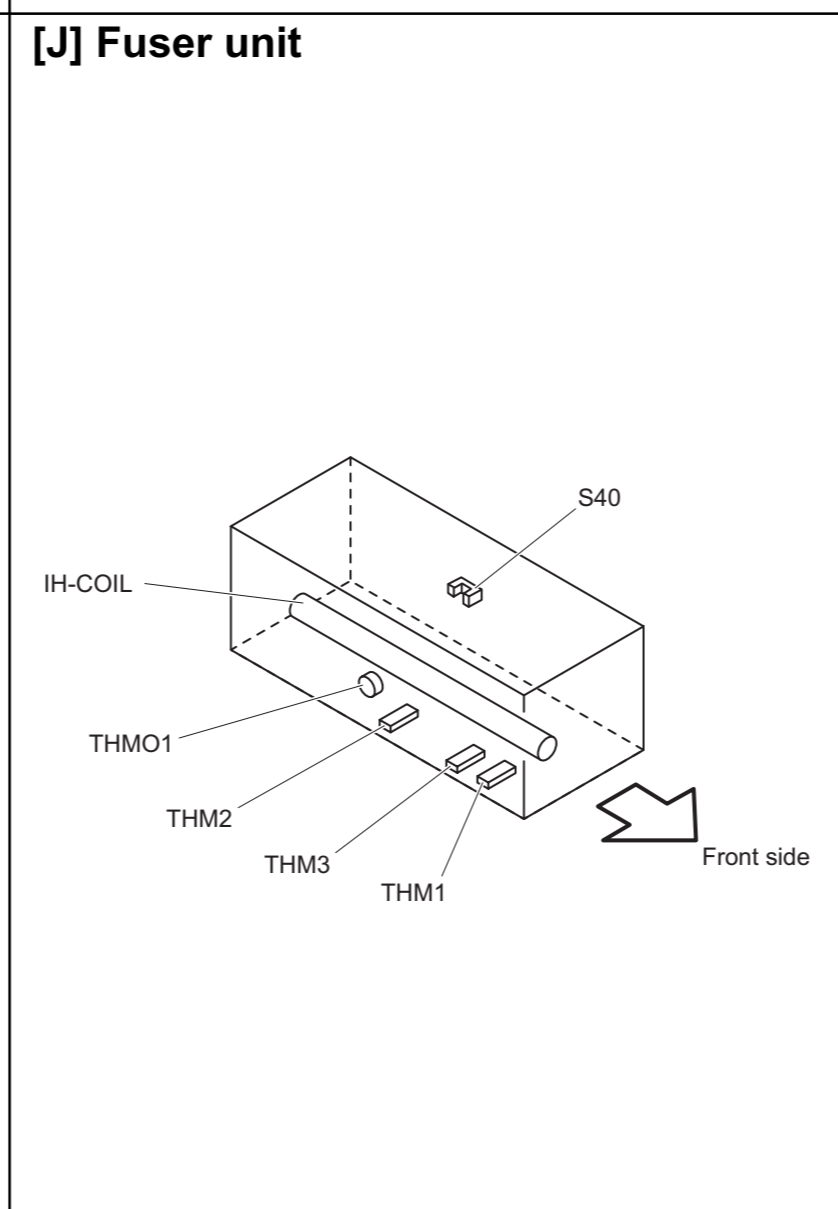
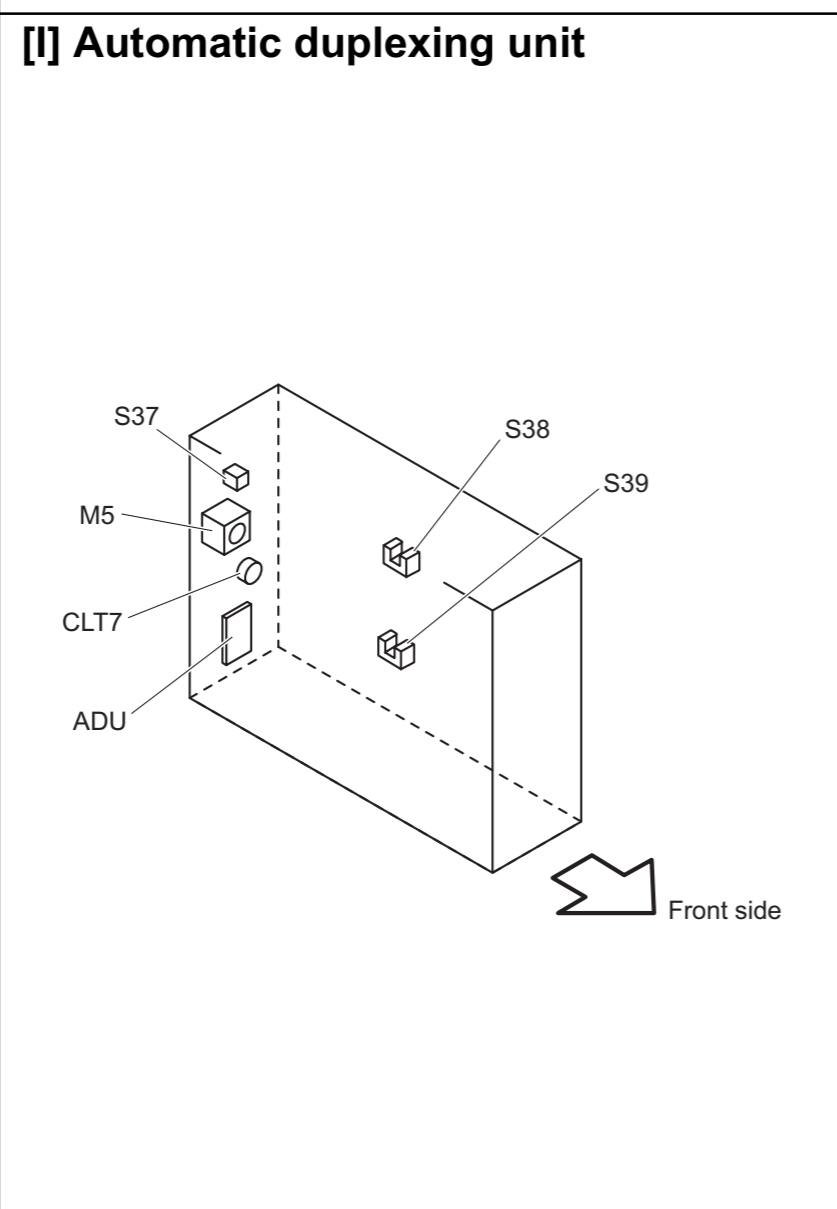
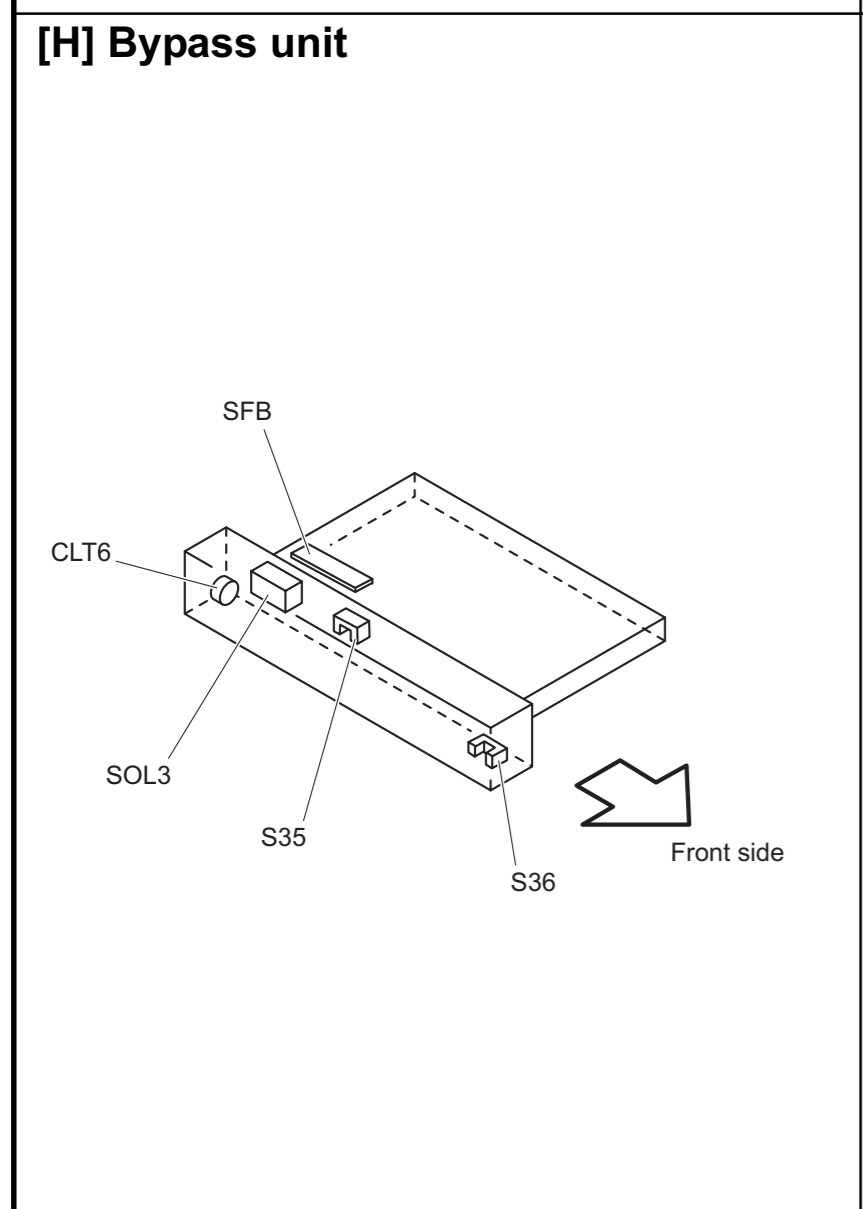
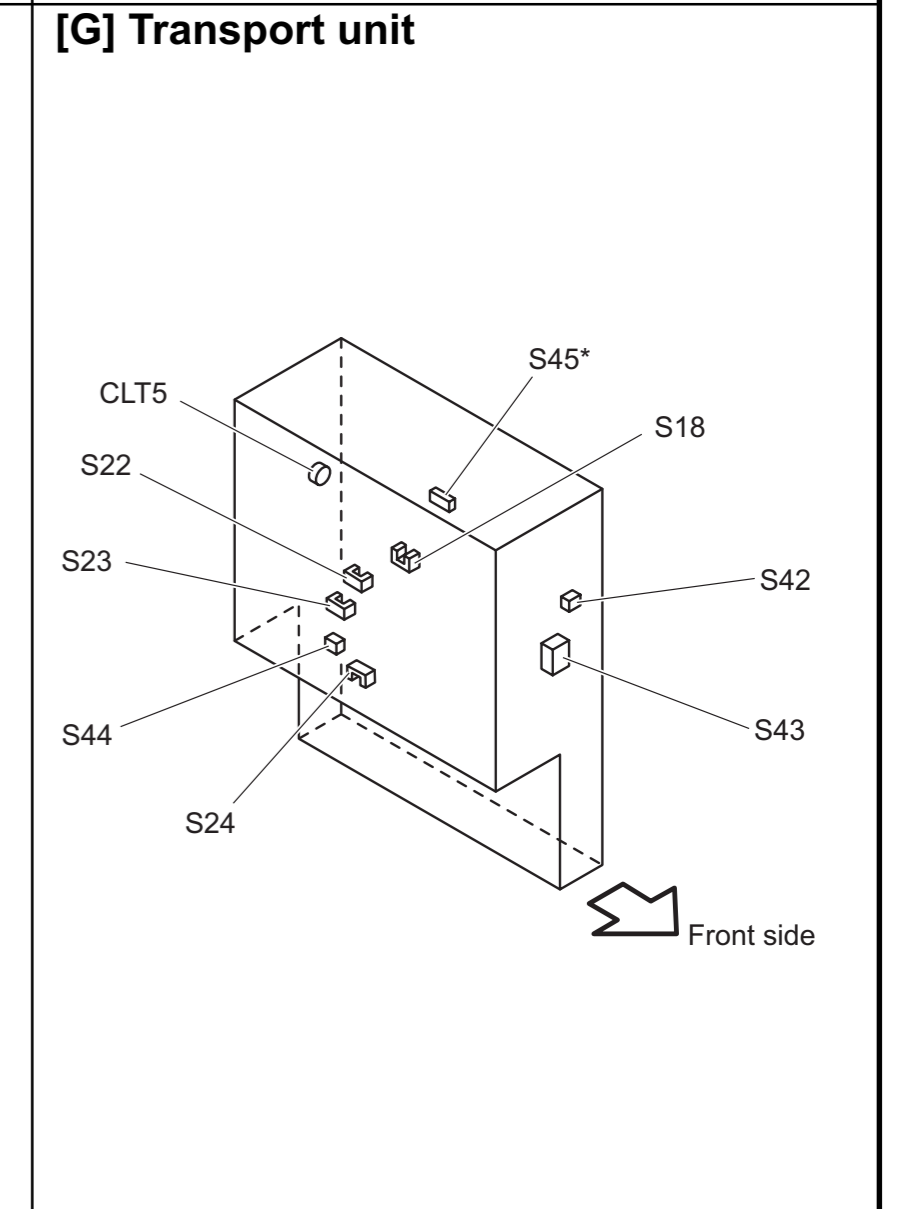
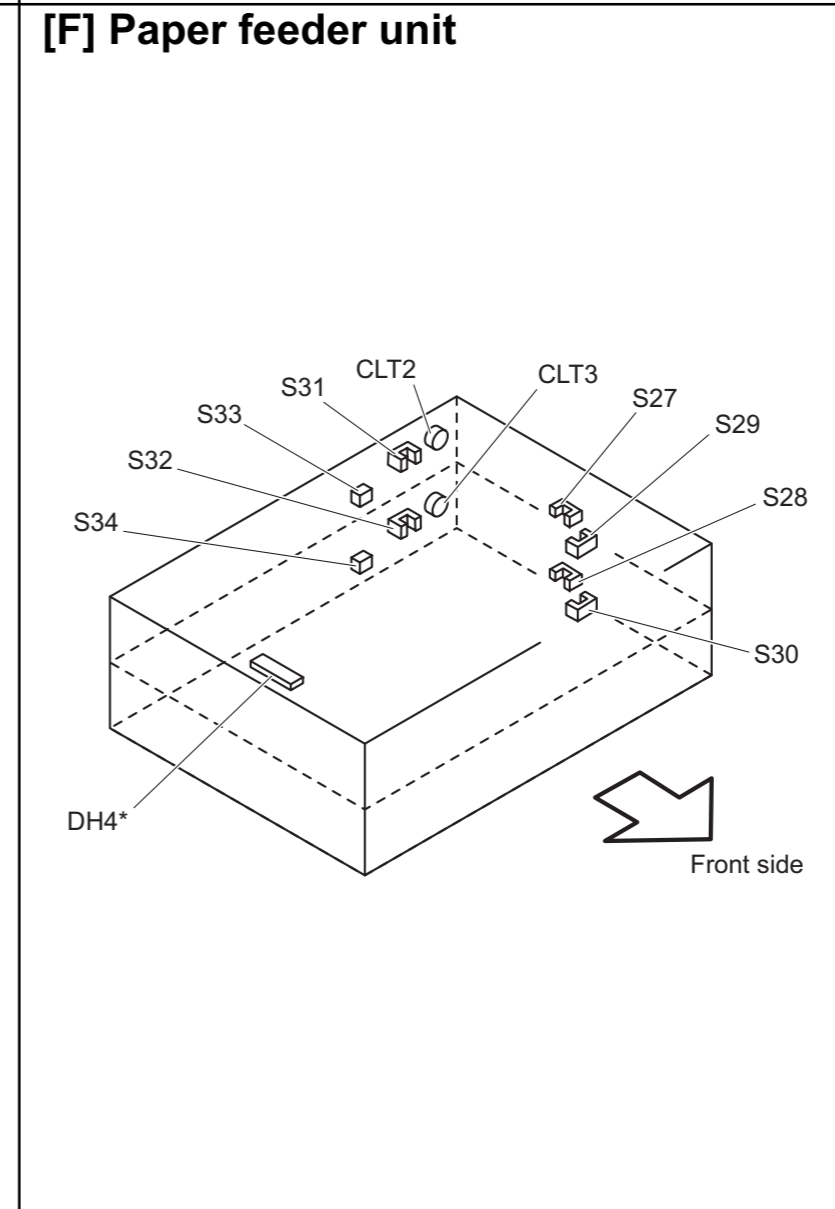
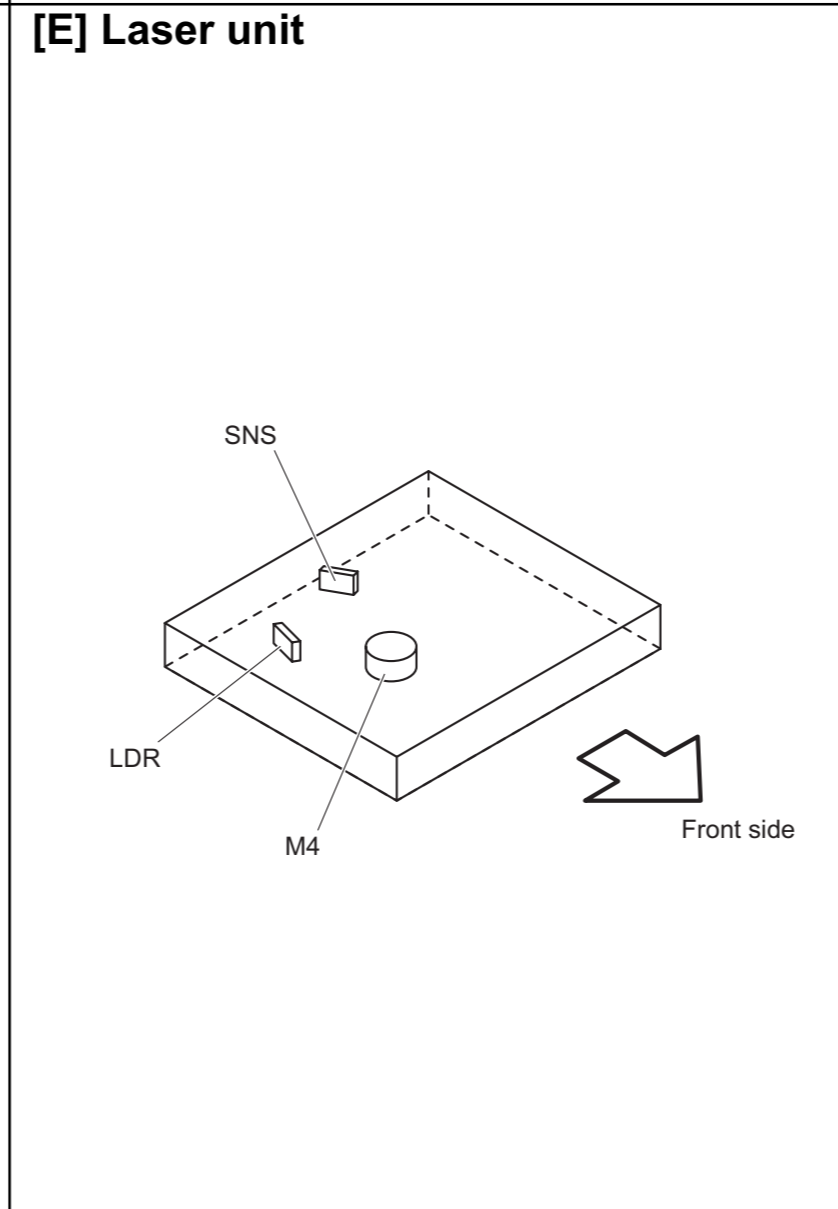
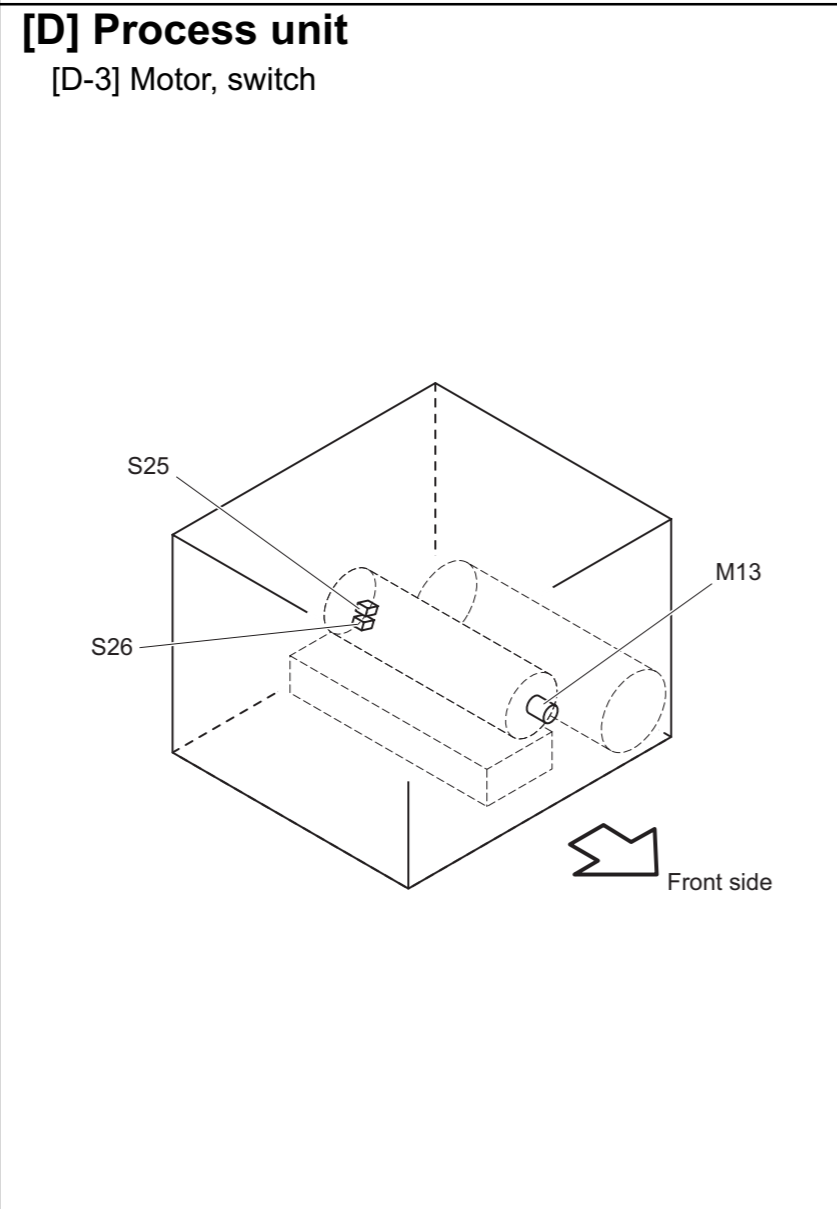
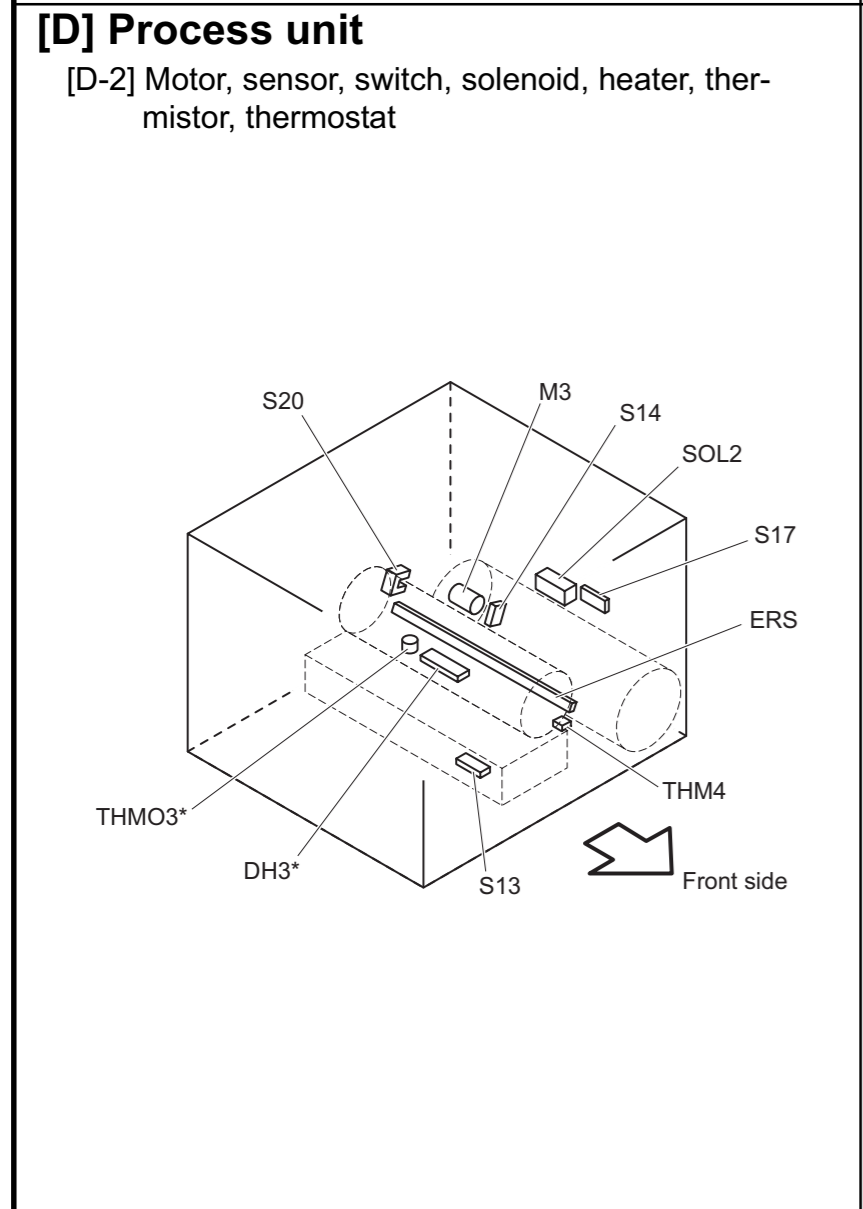
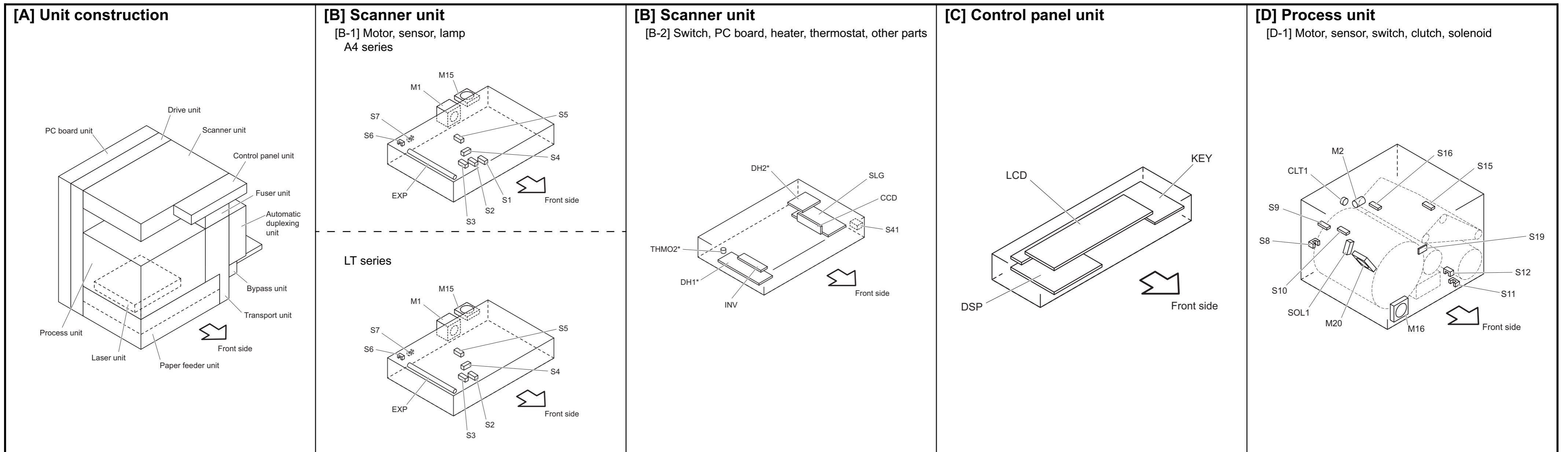
<Contents of file>



```
Version: VTD08.100 J
Serial Number: 0123456789
Date: MON SEP 26 18:34:40 2005
```

- File format (user_data.txt, setting_data.txt, sram_data.txt: all in common)
 - Line 1: Version
 - Line 2: Serial number
 - Line 3: Date

10.3 Electric Parts Layout



| Symbol | Name | Figure | Wire harness location |
|--------|---|--------|-----------------------|
| M1 | SCAN-MOT Scan motor | [B-1] | 4-G |
| M2 | BELT-CLN-MOT Transfer belt cleaner auger motor | [D-1] | 7-F |
| M3 | TNR-MOT Toner motor | [D-2] | 8-G |
| M4 | MDC-POL Polygonal motor | [E] | 8-B |
| M5 | ADU-MOT ADU motor | [I] | 6-G |
| M6 | MAIN-MOT Main motor | [K] | 6-B |
| M7 | EXIT-MOT Exit motor | [K] | 6-G |
| M8 | DRM-CLN-MOT Drum cleaner brush motor | [K] | 8-D |
| M9 | TRSP-MOT Transport motor | [K] | 6-C |
| M10 | TRY-MOT Tray-up motor | [K] | 8-F |
| M11 | DEV-MOT Developer motor | [K] | 6-B |
| M12 | REVLV-MOT Revolver motor | [K] | 6-F |
| M13 | CCL-MOT Charger cleaner motor | [B-1] | 8-C |
| M15 | SCAN-FAN-MOT Scanner unit cooling fan | [B-1] | 4-F |
| M16 | LSU-FAN-MOT Laser unit cooling fan | [D-1] | 7-D |
| M17 | IH-FAN-MOT IH control board cooling fan | [K] | 8-A |
| M18 | OZN-FAN-MOT Ozone exhaust fan | [K] | 8-A |
| M19 | PS-FAN-MOT Power supply cooling fan | [L] | 5-H |
| M20 | INTRNL-FAN-MOT Internal cooling fan | [D-1] | 7-D |
| M21 | HDD-FAN-MOT HDD cooling fan | [L] | 5-A |

| Symbol | Name | Figure | Wire harness location |
|--------|--|--------|-----------------------|
| S1-5 | APS 1-3, APS-C, APS-R Automatic original detection sensor | [B-1] | 4-E 4-F |
| S6 | HOME-SNR Carrriage home position sensor | [B-1] | 4-F |
| S7 | PLTN-SNR Platen sensor | [B-1] | 4-F |
| S8 | REVLV-HP-SNR Revolver home position sensor | [D-1] | 6-F |
| S9 | COLR-TNR-SNR Color toner cartridge sensor | [D-1] | 7-D |
| S10 | COLR-ATTNR-SNR Color auto-toner sensor | [D-1] | 7-C |
| S11 | K-DEV-POS-SNR Black developer contact position detection sensor | [D-1] | 7-E |
| S12 | K-DEV-TMR-SNR Black developer contact timing detection sensor | [D-1] | 7-E |
| S13 | K-ATTNR-SNR Black auto-toner sensor | [D-2] | 7-E |
| S14 | K-TRN-SW Black toner cartridge switch | [D-2] | 8-G |
| S15 | TRBLT-HP-SNR1 Transfer belt home position sensor-1 | [D-1] | 7-F |
| S16 | TRBLT-HP-SNR2 Transfer belt home position sensor-2 | [D-1] | 7-F |
| S17 | TNLV-SNR Image quality sensor | [D-2] | 8-H |
| S18 | TR2-POS-SNR 2nd transfer roller position detection sensor | [G] | 8-G |
| S19 | TEMP/HUM-SNR Temperature/humidity sensor | [D-1] | 7-D |
| S20 | USD-TNR-FLL-SNR Toner bag full detection sensor | [D-2] | 8-C |
| S22 | RGST-SNR Registration sensor | [G] | 8-G |
| S23 | FED-U-SNR Upper drawer feed sensor | [G] | 8-G |
| S24 | FED-L-SNR Lower drawer feed sensor | [G] | 8-G |
| S25 | CCL-F-POS-SW Charger cleaner front position detection switch | [D-3] | 8-C |
| S26 | CCL-R-POS-SW Charger cleaner rear position detection switch | [D-3] | 8-C |
| S27 | CST-U-TRY-SNR Upper drawer tray-up sensor | [F] | 8-E |
| S28 | CST-L-TRY-SNR Lower drawer tray-up sensor | [F] | 8-E |
| S29 | EMP-U-SNR Upper drawer empty sensor | [F] | 8-E |
| S30 | EMP-L-SNR Lower drawer empty sensor | [F] | 8-E |
| S31 | NEMP-U-SNR Upper drawer paper stock sensor | [F] | 8-E |
| S32 | NEMP-L-SNR Lower drawer paper stock sensor | [F] | 8-E |
| S33 | CST-U-SW Upper drawer detection switch | [F] | 8-E |
| S34 | CST-L-SW Lower drawer detection switch | [F] | 8-E |
| S35 | SFB-SNR Bypass paper sensor | [H] | 6-H |
| S36 | SFB-FED-SNR Bypass feed sensor | [H] | 6-G |
| S37 | ADU-SET-SW ADU opening/closing switch | [I] | 6-G |
| S38 | ADU-TRU-SNR ADU entrance sensor | [I] | 6-F |
| S39 | ADU-TRL-SNR ADU exit sensor | [I] | 6-F |
| S40 | EXIT-SNR Exit sensor | [J] | 6-C |
| S41 | MAIN-SW Main switch | [B-2] | 8-A |
| S42 | FRNT-COV-SW Front cover opening/closing switch | [G] | 8-H |

| Symbol | Name | Figure | Wire harness location |
|--------|--|--------|-----------------------|
| S43 | COV-INTLK-SW Cover opening/closing interlock switch | [G] | AC wire harness |
| S44 | SIDE-COV-SW Side cover opening/closing switch | [G] | 8-G |
| S45 | CLING-SNR Paper clinging detection sensor * Only for JPD model of all equipments | [G] | 8-F |

| Symbol | Name | Figure | Wire harness location |
|--------|---|--------|-----------------------|
| CLT1 | TRBLT-CLN-CLT Transfer belt cleaner clutch | [D-1] | 7-D |
| CLT2 | CST-U-FEED-CLT Upper drawer feed clutch | [F] | 8-D |
| CLT3 | CST-L-FEED-CLT Lower drawer feed clutch | [F] | 8-F |
| CLT5 | ZTR-COAT-CLT 2nd transfer roller contact clutch | [G] | 8-F |
| CLT6 | SFB-FEED-CLT Bypass feed clutch | [H] | 6-H |
| CLT7 | ADU-CLT ADU clutch | [I] | 6-F |
| CLT8 | COLR-DEV-TNR-CLT Color developer toner supply clutch | [K] | 8-D |
| CLT9 | COLR-DEV-CLT Color developer drive clutch | [K] | 8-D |
| CLT10 | K-DEV-CLT Black developer drive clutch | [K] | 8-D |
| CLT11 | K-DEV-LIFT-CLT Black developer lifting clutch | [K] | 8-C |
| CLT12 | RGST-CLT Registration clutch | [K] | 8-D |
| CLT13 | CST-U-TR-L-CLT Upper transport clutch (Low speed) | [K] | 8-D |
| CLT14 | CST-U-TR-H-CLT Upper transport clutch (High speed) | [K] | 8-D |
| CLT15 | CST-L-TR-L-CLT Lower transport clutch (Low speed) | [K] | 8-F |
| CLT16 | CST-L-TR-H-CLT Lower transport clutch (High speed) | [K] | 8-F |

| Symbol | Name | Figure | Wire harness location |
|--------|--|--------|-----------------------|
| SOL1 | ATTNR-SHUT-SOL Color auto-toner sensor shutter solenoid | [D-1] | 7-D |
| SOL2 | TNLV-SHUT-SOL Image quality sensor shutter solenoid | [D-2] | 8-H |
| SOL3 | SFB-SOL Bypass pickup solenoid | [H] | 6-G |

| Symbol | Name | Figure | Wire harness location |
|--------|------------------------------------|--------|-----------------------|
| HVT | PS-HVT High-voltage transformer | [K] | 6-D |

| Symbol | Name | Figure | Wire harness location |
|--------|---|--------|------------------------|
| CCD | PWA-F-CCD CCD driving PC board (CCD board) | [B-2] | 3-F |
| SLG | PWA-F-SLG Scanning section control PC board (SLG board) | [B-2] | 4-G |
| DSP | PWA-F-DSP Display PC board (DSP board) | [C] | 1-G |
| KEY | PWA-F-KEY Key control PC board (KEY board) | [C] | 1-H |
| LDR | PWA-F-LDR Laser driving PC board (LDR board) | [E] | 8-B |
| SNS | PWA-F-SNS H-sync signal detection PC board (SNS board) | [E] | 8-B |
| SFB | PWA-F-SFB Bypass tray slide guide width detection PC board (SFB board) | [H] | 6-H |
| ADU | PWA-F-ADU ADU driving PC board (ADU board) | [I] | 7-G |
| IH | PS-IH IH control PC board (IH board) | [K] | 7-B AC wire harness |
| DRV | PWA-F-DRV Driving PC board (DRV board) | [K] | 6-G |
| SYS | PWA-F-SYS System control PC board (SYS board) | [L] | 3-A |
| LGC | PWA-F-FIL Logic PC board (LGC board) | [L] | 6-A |
| FIL | PWA-F-FIL Filter PC board (FIL board) | [L] | 6-H AC wire harness |

| Symbol | Name | Figure | Wire harness location |
|--------|---|--------|-----------------------|
| THM1 | THMS-EDGE-FBLT Front edge thermistor | [J] | 7-C |
| THM2 | THMS-MAIN-FBLT Main thermistor | [J] | 7-C |
| THM3 | THMS-SUB-FBLT Sub thermistor | [J] | 7-C |
| THM4 | THMS-DRM Drum thermistor | [D-2] | 7-F |
| THMO1 | THERMO-FSR Fuser thermostat | [J] | AC wire harness |
| THMO2 | THERMO-SCN-DH Scanner damp heater thermostat | [B-2] | AC wire harness |
| THMO3 | THERMO-DRM-DH Drum damp heater thermostat | [D-2] | AC wire harness |

| Symbol | Name | Figure | Wire harness location |
|--------|-------------------------------|--------|-----------------------|
| INV | INV-EXP Inverter board | [B-2] | 4-G |
| LCD | LCD LCD panel | [C] | 1-G |
| HDD | HDD Hard disk | [L] | 5-B |
| PS | PS-ACC Switching regulator | [L] | AC wire harness |
| BRK | BREAKER Breaker | [L] | AC wire harness |

| Symbol | Name | Figure | Wire harness location |
|---------|--|--------|-----------------------|
| EXP | LP-EXPO Exposure lamp | [B-1] | 3-G |
| ERS | LP-ERS Discharge LED | [D-2] | 7-E |
| IH-COIL | IH-COIL IH coil | [J] | AC wire harness |
| DH1 | SCN-L-DH Scanner damp heater (Left) * Optional for NAD/MJD model, standard for other models | [B-2] | AC wire harness |
| DH2 | SCN-R-DH Scanner damp heater (Right) * Optional for NAD/MJD model, standard for other models | [B-2] | AC wire harness |
| DH3 | DRM-DH Drum damp heater * Optional for NAD/MJD model, standard for other models | [D-2] | AC wire harness |
| DH4 | CST-DH Drawer damp heater * Only for JPD model of all equipments | [F] | AC wire harness |

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